6th Annual ARRL SNJ Section Convention

Presented By The

Gloucester County Amateur Radio Club
W2MMD

Celebrating Our 65th Year

www.w2mmd.org

Open To The Public At 8:00 AM : Rain or Shine

46th Annual Hamfest : Sunday, September 8, 2024

ADMISSION : $10.00
Non-Ham Spouses and Kids FREE

Vendors and Tailgaters of new and used radio and electronic equipment

Gates open at 6:00 am for vendors and tailgaters : **Rain or Shine**

In The Event of Rain, Covered Spaces Will Be Available.

Tailgating rules (open grassy areas only) :
- **$10.00 per vehicle space, up to 10 feet**
- **No reserving / holding spaces for tailgaters not present**
- **First Come, First Serve**

Table rules (covered pavilions only) :
- **$15.00 per table (yours), or table space up to 8 feet**
- **Tailgating under pavilions will fall under "Table Rules"**

Some pavilion spaces have electric • Space price does not include admission

Programs will start at 8:00 am in the Classroom Building
See schedule on the 2024 Hamfest webpage
- **0800 Hours : John Zaruba Jr, K2ZA : Park-On-The-Air (POTA)**
- **0900 Hours : Marc Federici, WM2Y : Fox Hunting**
- **1000 Hours : ARRL Update**
  - **Robert Famiglio, K3RF : ARRL Atlantic Division Director**
  - **Marty Pittinger, KB3MXM : ARRL Atlantic Division Vice Director**
  - **Tom Preiser, N2XW : ARRL Southern New Jersey Section Manager**

ARRL VEC License Testing will start at 9:00 am
- **Exam Testing In The W2MMD Clubhouse • Exam Fee : $15.00**
- **All examinees are required to have an FRN & e-mail address**

Talk-In Station :
147.180 (131.8) / EchoLink W2MMD-R

Grand Prize : $200.00
+
Many More Prizes! Door Prize Drawings Throughout The Day!

Food And Beverages Catered By

BSA Troop 9

West Deptford, NJ

www.bsatroop9.scoutlander.com

Fox Hunt

↑ Additional Activities ↓

Balloon Launch

Gloucester County 4-H Fairgrounds • www.w2mmd.org
235 Bridgeton Pike (Route 77) • Mullica Hill, NJ 08062 • GPS : 39.715572°, -75.211944°

Version: 2024-08-14

CrossTalk

September 2024

65 Years Of Service To Amateur Radio & Our Community

Issue 65 : 09

A   2024 Club Officers

President :   Jonathan Pearce, WB2MNF
Vice President :   Ronald Block, NR2B
Treasurer :   John O'Connell, K2QA
Recording Secretary :   John Zaruba Jr, K2ZA
Corresponding Secretary :   Michael Resnick, N2WOQ

General Membership Meeting
Wednesday, September 4, 2024 @ 1900 Hours
In-Person & ZOOM : 943 0211 9674, 843147

Tech Saturday Forum
Saturday, September 7, 2024 @ 0900 Hours
W2MMD Clubhouse

GCARC TechNet ZOOM Forum
Every Monday @ 1930 Hours
ZOOM Meeting ID : 933 9943 3123, 800835

License Testing Session
Thursday, September 12, 2024 @ 1900 Hours
W2MMD Clubhouse

Amateur Radio & Emergency Communications
Saturday, September 14, 2024 @ 0900 Hours
W2MMD Clubhouse

Board of Directors Meeting
Wednesday, September 18, 2024 @ 1900 Hours
W2MMD Clubhouse

Tuesday AfterNoon 2M Net @ 1200 Hours
Thursday Night 2M Net @ 2000 Hours
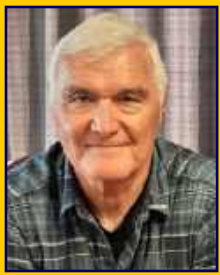
Tuesday & Thursday 10 Meter Net @ 1930 Hours
28.465 MHz or 28.475 MHz

Monday & Thursday Night 40M Net @ 1930 Hours
7.225 MHz (+/- 5 or 10 kHz)

September 2024

Summer is ending, Field Day scores have been calculated and reported, last-minute vacations are being squeezed in and kids are dreading heading back to school, yet GCARC activities continue unabated. There's a full schedule of General Membership presentations, Tech Saturday events, license classes, and special events like fox hunts planned for the upcoming months.

Hamfest - September 8

I hope that every Club member has a large notation on their calendars for September 8th on which is inscribed in big letters *"Go to the Hamfest!"*. Along with Field Day the Hamfest is one of the two major Club events of the year, and a large volunteer group is needed to run the event, so if you're interested in volunteering please let me know and I'll forward your information accordingly. The Hamfest also provides an opportunity to get together with a large group of hams from various areas, sit through some interesting technical and organizational presentations, and perhaps purchase some valuable amateur radio equipment! Weather for the Hamfest is always great (!) so we expect to have a large turnout of members for this event.

Recognizing Member Contributions

At the August General Membership meeting the Club recognized with **Volunteer Appreciation Awards** four members whose activities have contributed significantly to the Club. These certificates are awarded by a vote of the Board of Directors quarterly after considering the activities of members in recent months. Those receiving awards this month are :

- **Greg Ciraula W5DO** for ongoing efforts in net management and participation in Skywarn and ARES leadership
- **Marc Federici WM2Y** for continuing technical contributions in a wide variety of projects and also leadership in Fox Hunting events
- **Steve Farney W2SEF** for net control leadership and presenting various topics on the Monday night TechNet sessions
- **Gary Reed N2QEE** for many years of coordination of volunteer examination testing processes

In addition the **Milt Goldman** committee composed of previous recipients of that award selected two long-time Club members for their substantial contributions to the Club over many years of activity :

- **Jim Wright N2GXJ** for years of Club leadership, technical contributions, presentations, and publications
- **John Zaruba Jr K2ZA** for more than 44 years of Club involvement that include terms as a Club officer, presenter, technical advisor and mentor to many Club members.

Thanks to all of these members for their contributions to the continuing success of the Club.

Early Morning Meteor Scatter

"You've got to get up pretty early in the morning", as they say, to work meteor scatter. Propagation changes significantly as does the position of the meteors relative to your QTH so the fun is almost over by the time the sun comes up. An unfortunate bit of insomnia caused me to be at the Clubhouse about 4:30 AM on August 11th, the peak day of the meteor shower, but I did log six contacts, four of which occurred before 5 AM. **Dan Caguiat KV2N** and **Chris Prioli AD2CS** joined me a little after 6, but although we were still decoding MSK144 packets we didn't get any more contacts. At the peak time, though, we were being heard **(See picture below)** throughout the East Coast and as far West as mid-Texas. It's an interesting part of ham radio, but my aversion to early morning hours is probably not going to make it a regular occurrence for me.
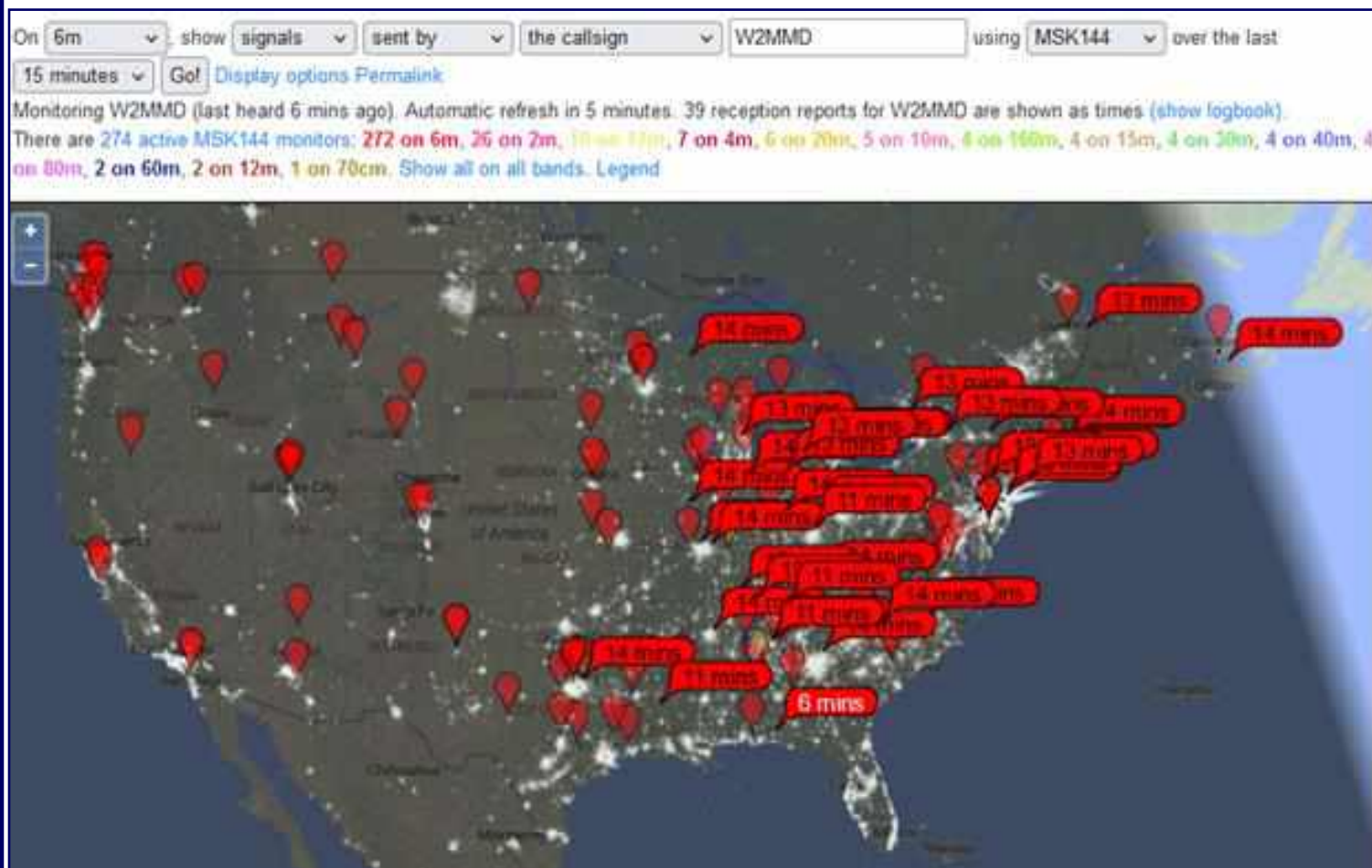
Opportunities For Member Project Collaboration

Many Club members are aware of the ongoing activities in the amateur radio balloon project, but fewer may realize the intense collaboration happening on the Club's Discord site and during Saturday sessions at the Clubhouse. The Discord site serves as both an information repository and a communication hub, allowing members to coordinate and share updates on their activities. This collaboration significantly enhances both the enjoyment and success of individual projects, as members connect with others who share similar interests and goals. Even those not directly involved in a project can easily stay informed and engaged through these discussions.

The **Discord** site currently has channels for the balloon, SDR, Winlink, LoRa and Meshtastic and EME, and a channel was recently added for the OpenGD77 firmware that some members are using to enhance DMR and satellite operation of various HTs. Here's the link to join that group : **https://discord.gg/dXHX742b**

Woodruff Middle School STEM Activities Start In September

The planning for the middle school STEM program involving amateur radio ballooning is well underway, spearheaded by **Angela Metzger KE2DRJ**, the dedicated science teacher and program leader. The Club's balloon team has collaborated closely with Angela to design an engaging curriculum in which students will form small teams to assemble the radio and other components of the balloon. Each team will then have the opportunity to launch and track their balloon, gaining hands-on experience. The program includes comprehensive instruction on soldering and component assembly, as well as lessons on how winds, temperature, and other environmental factors influence the balloon's trajectory. To enhance the learning experience, the school plans to purchase a Raspberry Pi 5 computer and an SDP Play radio, enabling students to tune into and view radio signals, and track them using various online methods. The program is structured to run for ten sessions on Monday afternoons, after which the potential for future sessions will be evaluated.

September Clubhouse Activities

Late August and September will be a busy month for Clubhouse activities. On August 31st the Club will host members of a group of Meshtastic users that include some newly licensed hams from our licensing classes. This group is interested in using unlicensed Meshtastic radios for personal communications in emergency situations, and we'll be assisting them in getting those radios set up and configured.

Tech Saturday Forum on September 7th will cover Software Defined Radios, the hardware options available and the many types of software that can be used both for radio operation and for experimentation with different modes of communications. This session was given several years ago but may be of interest to newer members or those who wish to be updated on the capabilities of newer types of SDR software.

On September 14th we'll be presenting a session to a group of newly licensed hams who are primarily interested in using amateur radio as a means of communication within their group in emergency situations. This session will cover techniques such as 2 meter simplex operation, HF operation using NVIS antennas, Winlink, and Meshtastic.

We also hope to launch several balloons during September when weather and other conditions allow it and will announce those potential opportunities as far in advance as possible so that others can attend if interested.

EME Coming To GCARC!

At press time for this article the Foundation approved the purchase of a Sub-Lunar portable dish and patch antenna for 1296 MHz to be used in Earth-Moon-Earth (moonbounce) communications. Arrangements are being made to pick up the antenna (which is manufactured in NJ) and work out the configuration of equipment that will be needed to use it. This comes amidst many other Club projects such as the balloon launches and the installation of the VHF towers that are keeping the most active Club members quite busy, which means that there's a significant opportunity for others who are interested in this are to get involved!

EME communication involves many complex areas to understand but lots of reference materials are available many of which are linked on the **#eme Discord channel**, so if you're interested in helping bounce radio signals off of the moon please let me know and we'll get you involved in this new Club activity.

73 de Jon WB2MNF

6th Annual ARRL Southern New Jersey Section Convention
46th Annual GCARC Hamfest Forum Schedule

John Zaruba, K2ZA
k2za@icloud.com
856-269-9938

0800 Hours : John Zaruba Jr, K2ZA : Park-On-The-Air (POTA)

POTA is a worldwide radiosport award program that encourages licensed Amateur Radio operators to visit and operate equipment in a variety of parks and public lands.

Marc Federici, WM2Y
marc.federici@gmail.com
609-501-2938

0900 Hours : Marc Federici, WM2Y: Fox Hunting

An introductory program to Fox Hunting, including a discussion of successful techniques, followed by a Fox Hunt on the Gloucester County 4-H Fairgrounds.

A limited amount equipment will be provided to the participants.

Balloon Launch @ 1100 Hours

Robert Famiglio, K3RF
k3rf@arrl.org
610-359-7300

Marty Pittinger, KB3MXM
kb3mxm@arrl.org
410-356-7899

Tom Preiser, N2XW
n2xw@arrl.org
609-618-0224

1000 Hours : ARRL Update

Annual Summary of the ARRL Activities and a Discussion of the Current Issues :
- Robert Famiglio, K3RF : ARRL Atlantic Division Director
- Marty Pittinger, KB3MXM : ARRL Atlantic Division Vice Director
- Tom Preiser, N2XW : ARRL Southern New Jersey Section Manager

Welcome New Club Members :

Jack Berghof Jr, an Associate Member from Vineland, NJ
Jonathan Davidson, KE2DYD, a Technician Class from Gibbstown, NJ

We are glad to have you as members of the Club and hope to see you regularly at Club meetings, events, and activities. Hope to see you at the September 4th General Membership Meeting, either in-person or on ZOOM, the September 7th Tech Saturday Forum, the Monday Night GCARC TechNet ZOOM Forum, and the Dinner @ The W2MMD Clubhouse on September 25th.

We also hope to *"SEE"* you on the *"AIR"* on the following nets :
- Sunday Night Skywarn 2 Meter Net @ 1930 Hours.
- Sunday Night ARES 2 Meter Net @ 2000 Hours.
- Tuesday AfterNoon 2 Meter Net @ 1200 Hours.
- Tuesday & Thursday Night 10 Meter Rag Chew Nets @ 1930 Hours on 28.465 or 28.475 MHz.
- Monday & Thursday Night 40 Meter Nets on 7.225 MHz (+/- 5 or 10 kHz) @ 1930 Hours.
- Thursday Night Rag Chew 2 Meter Net @ 2000 Hours.

All 2 Meter nets are on our 147.180 MHz (PL 131.8) repeater or on EchoLink W2MMD-R.

Tuesday & Thursday Nights 10M Rag Chew Net @ 1930 Hours
28.465 MHz or 28.475 MHz

Monday & Thursday Night 40 Meter Net @ 1930 Hours
7.225 MHz (+ / - 5 or 10 kHz)
NCS : Jim Clark, KA2OSV

Amateur Radio & Emergency Communications
Saturday, September 14, 2024 @ 0900 Hours
W2MMD Clubhouse

On Saturday, September 14, 2024, we will be presenting a session to a group of newly licensed hams who are primarily interested in using Amateur Radio as a means of communication within their group in Emergency Situations. This session will cover techniques such as 2 Meter simplex operation, HF operation using NVIS antennas, Winlink, and Meshtastic.

Everyone is welcome.

"Ask not what your Club can do for you,
Ask what you can do for your Club"
- KA2OSV

General Membership Meeting

Wednesday, September 4, 2024 @ 1900 Hours

Pfeiffer Community Center

Simulcast Live Via ZOOM : **Meeting ID : 943 0211 9674; Passcode : 843147**
Join ZOOM Meeting Link : https://bit.ly/44P4HCU

Go to : www.w2mmd.org to download the ZOOM log-on instructions PDF

VHF Propagation And W2MMD 2 Meter Repeater Coverage Model

This month, our speaker is **Norm Coltri, K2NRC**, a Professional Engineer, a telecommunications consultant, and a fellow Club member. He will cover the stages of propagation modeling as used by the FCC from the late 1950's through to today. During this period, modeling has progressed from nomographs to sophisticated computer algorithms. Various examples will show how the process has changed, and how the FCC and the licensees have adjusted to these changes. Several of the FCC glitches will be shown and discussed.

The highlight of the talk will reveal a model of the current **W2MMD 2 Meter repeater coverage (See picture below)** based on the Longley-Rice computer modeling software. This will give us some insight as to why some of us are easily able to access the repeater and others not so.

Please join us at the Wednesday, September 4, 2024 General Membership Meeting for this interesting program. Being your questions. See you there!
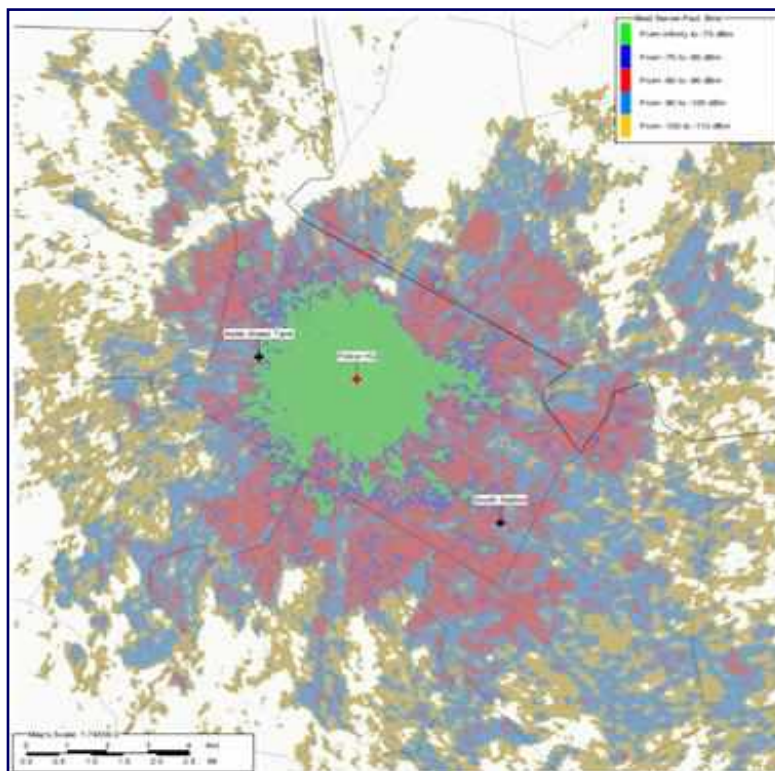
Gloucester County Amateur Radio Club
YouTube Channel
https://www.youtube.com/@W2MMD

GCARC TechNet ZOOM Forum

GCARC TechNet ZOOM Forum is scheduled to be available every Monday Night until December 30, 2024.

There will not necessarily be a topic scheduled every Monday Night, but the opportunity is available to schedule succeeding topics of interest on consecutive Monday Nights.

Every Monday @ 1930 Hours

Forum Topic : *See e-mail and website for more information*

Go to : https://gloucestercountyarc.weebly.com/gcarc-technet.html
for TechNet Information Resources and ZOOM Instructions

Meeting ID : 933 9943 3123 ; Passcode : 800835
Join ZOOM Meeting Link : https://bit.ly/3K8bWwj

Tech Saturday Forum

September 7, 2024 @ 0900 Hours

W2MMD Clubhouse

Forum Topic : Software Defined Radio

This Tech Saturday Forum will cover Software Defined Radios, the hardware options available and the many types of software that can be used both for radio operation and for experimentation with different modes of communications. This session was given several years ago but may be of interest to newer members or those who wish to be updated on the capabilities of newer types of SDR software.

Q & A Session About All Things Ham Radio and Socializing!

The HF Station Will Be Available For Local Operation!

Tech Saturday sessions are held at the W2MMD Clubhouse on the first Saturday of the month following the Wednesday Night General Membership Meeting and are designed to be hands-on collaborative events focused on using the Clubhouse resources to demonstrate various aspects of Amateur Radio and related technical areas. Previous sessions have covered USB software-defined radios, Raspberry Pi and Arduino devices, satellite operations and other similar topics.

We would like to invite all of our new members as well as our veteran members to our Tech Saturday Forums to help answer any questions and discuss any and all issues the new members have come across as they progress through the *Amateur Radio Experience*.

The Discussion Theme is a QSO starting point - a way to initiate a conversation. All Tech Saturdays are an open QSO of all subjects of Amateur Radio interest. All questions are welcome as well as a venue for hams to show off their latest ham radio projects or gadgets. Have a problem programming that HT, we can help! Not sure what radio or antenna to buy, we can help!

All Club Members who would like Clubhouse access to use its radio equipment would have to have some brief "Elmering" on the Clubhouse rules, such as using the alarm system, the A/C and heaters, the antenna system, and the radio equipment. The Club's HF station is reserved for local use on Tech Saturday.

All are welcome - Hams and Non-Hams - Club Members and Non-Club Members.

Need a ride to a Club meeting, event, or activity?

Just send a message to the Club's e-mail reflector asking if a member can pick you up

GCARC *<at>* MAILMAN *<dot>* QTH *<dot>* NET

All Club members have access to this FREE e-mail service

GCARC Monthly VE Exam Testing Summary - August 8, 2024

Gary Reed. N2QEE, Reports, There were two sessions in the August report.

The first one was an in home session for **Charlie Wahl Jr, KC2STO** on July 24th which was administered at his home in Westville. He was trying for an upgrade to Amateur Extra. He didn't pass the exam. Hopefully we can try again in the future.

The VE's were **Chris AD2CS**, **Earl KC2NCH,** and **Gary N2QEE**

The monthly session was held August 8th at the W2MMD Clubhouse. We had one candidate who was testing for Technician and who passed. The candidate was :
- **Jonathan Davidson KE2DYD** from Gibbstown

His license was posted on the FCC ULS site on August 13th.

The participating VE's were :
- **Mike N2WOQ**
- **Rich W2RHS**
- **Jerry K2EAB**
- **Earl KC2NCH**
- **Chris AD2CS**
- **Len W2LJR**
- **Court KD2SPJ**
- **Gary N2QEE**

Thank you to the participating VE's. The next VE session will be held Sunday, September 8th at the GCARC Hamfest at 9 AM in the W2MMD Clubhouse. The Club's monthly VE session will be held on September 12th at 7 PM in the W2MMD Clubhouse.

The league has said that 2024 will be the last year that the VEC will create, print, and ship new examination booklets. They are going more one step closer to a complete digital transformation. The VE teams will be transiting to the ExamTools examination system in 2025 in preparation for 2026 Technician pool of questions. This shifting to this web-based platform will reduce VEC printing, storage, shredding, and shipping of the paperwork both to and from team.

The ExamTools system can administer online examinations or generate printed exams. Online exams can be used at a in-person or remote video supervised sessions.

The programming includes registering and tracking candidates throughout the session, on screen exams and grading , online signing of CSCE and 605 forms by the candidate and examiners logging and compiling session stats and VE participation list (test report summary), and output files to the coordinating VEC. ExamTools manages/handles almost everything needed to conduct a test session.

At this time I'm still waiting for the ExamTools software and a possible list of equipment that what would be required at the actual session using the ExamTools system (tablets, cameras and such.)

"We hope our VE's are willing to take on this endeavor with us as we continue to move towards electronic testing, as is vital to the amateur radio community. We will be here every step of the way to ensure a smooth transition as we remain committed to offering quality programs and services, providing a superior overall experience for our customers and potential customers, and to demonstrate our capabilities and value to the public." Maria Somma AB1FM, ARRL VEC Manager

It's going to be an interesting year for the Volunteer Testing program. I see some possible problems in adopting the system. Please stay tuned.

Monday, September 2, 2024

DAs and DITs

>> Congratulations to the following Club Members :
- **Dan Caguiat, KV2N (ex. KE2DPR) :** New vanity callsign
- **Kerri Caguiat, K2CAG (ex. KE2DKD) :** New vanity callsign
- **Ben Johnson, NE2R (ex. WB2GUK)** : New vanity callsign

>> The **World Wide Ragchew Amateur Radio Net** takes place @ 1100 Hours every Sunday morning. Direct Connection's to the Worldwide Ragchew Amateur Radio Net :
- **Allstar/ Echolink node 51092 GB3ZN-R**
- **Allstar / Echolink node 525960 (asl image)**
- **Allstar node 525961 (asl image)**
- **Allstar node 525963 (asl image)**
- **Echolink conference server WWARG**
- **Echolink node 561802= W1SBW-L**

More information about the World Wide Ragchew Amateur Radio Net can be found at :
https://extendedfreedom.network/index.php/nets/worldwide-ragchew-amateur-radio-net

Gloucester County Amateur Radio Club Elmers

We are still looking for some more Club Elmers. If you would to add your name to the Elmer's List, send your specialty to w2mmdgcarc@gmail.com. Here is what we have so far :

- **Tony Starr, K3TS : Antenna Construction; Contesting; CW Help and Training**
- **Ken Bozarth, KN2U : Antennas**
- **Jeff Welsh, KD2AZI : Boat Anchor Repair & Operation; Raspberry Pi; Arduino; Python; POTA; Mobile Installation & Operating**
- **Karl Frank, W2KBF : Digital Messaging (FLDIGI, WinLink)**
- **Lenny Rust, W2LJR : DMR Radios & Programming**
- **Ron Block, NR2B : Lightning protection & grounding**
- **Chris Prioli, AD2CS : Kit Building; Antenna Building; Radio Programming; PC and Electronic Troubleshooting; ham radio licensing & studying**
- **John Zaruba Jr, K2ZA : Yaesu System Fusion Radio Programming, POTA, SOTA**
- **Jerry Barnish, K2EAB : Radio Astronomy**
- **Mike Thompson, KG4JYA : Radio Astronomy; VARA (HF and FM); WinLink**
- **Steve Farney, W2SEF : WSJT-X; FT-8; LoTW; TQSL; Grid Square**
- **Carl Wittig, N2CRW : Audacity® Audio Editor**
- **Gary Mirkin, WA3SVW : FLDIGI; MMSSTV**
- **Jon Pearce, WB2MNF : Satellite Communications**
- **Frank Romeo, N3PUU : Toilet Installer; Jack-Of-All Trades - Master Of None**
- **John Hill, W2HUV : Local & Remote W2MMD HF Station Operation, Training & Support**
- **Dave Sheppard, W2PAX : National Traffic System**

ZOOM Protocols For GCARC Meetings

To provide for a more pleasant and efficient ZOOM experience for our Club members, several protocols have been established for use at these meetings.

- **All participants will be MUTED by the administrator.**
- **If you wish to comment, please use the ZOOM "Raise Hand" feature. (See Below)**
  - **In the meeting controls, click "Reactions", then click "Raise Hand".**
  - **Users can also raise or lower their hand with the Alt+Y (Windows) or Option+Y (macOS) keyboard shortcuts.**
- **The administrator will then un-mute you so you can join the conversation. You will not be able to un-mute yourself.**
- **If you are going to use your camera, please be attired as you would be if physically coming to the meeting. Otherwise, please turn off your video.**

Thanks for following these points to help our meetings run smoothly.
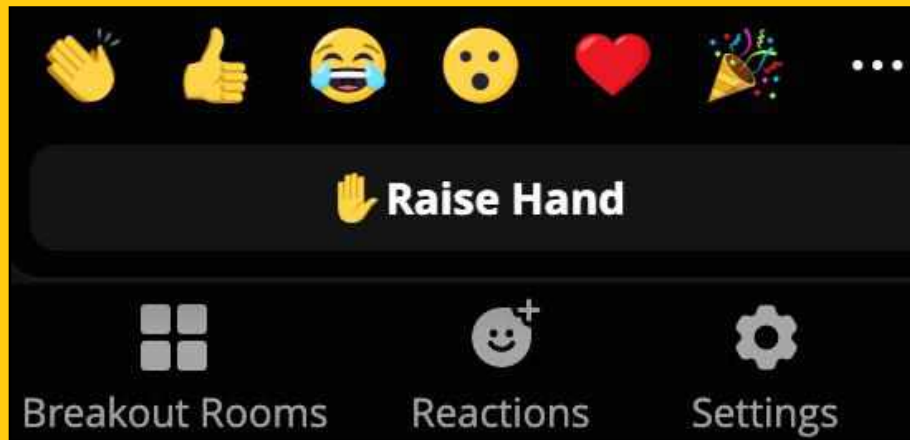
ADIF Logs Wanted When Operating As W2MMD @ The Clubhouse
By Jim Wright, N2GXJ - Contact me via the e-mail address on the Club Roster List

It is a common courtesy in ham radio to be able to QSL 2-way contacts made with other hams. We're pretty good about doing this for our field day contacts made each year, but are falling behind in this for contacts we make from the Clubhouse as W2MMD.

So here is the ask :

If you operate from the Clubhouse as W2MMD (e.g. on HF, UHF/VHF, or on Satellite, at Tech Saturday, or during contests or other), please email me the electronic log entries in ADIF format from the logger program you used for those contacts?

That way, just like I do following field day each year, I can get them uploaded to LOTW and to eQSL to offer the courtesy of an electronic QSL to those who make contact with us as W2MMD here in NJ.

Thank you

Regional (Atlantic & Hudson Divisions) Hamfests & Events

September 7, 2024 : Lancaster Amateur Radio Club, Lancaster Hamfest, Transit Drive In, 6655 South Transit Road, Lockport, NY. **www.w2so.org**

September 7, 2024 : Fair Lawn Amateur Radio Club, Fair Lawn ARC Hamfest, Fair Lawn Memorial Pool, Bellair Avenue at Dewey Place, Fair Lawn, NJ. **www.hamfest.fairlawnarc.org**

September 7, 2024 : Ocean Monmouth Amateur Radio Club, OMARC Fall Hamfest, Spring Lake Heights Volunteer Fire Company No. 1, 700 6th Avenue, Spring Lake, NJ. **www.n2mo.org**

September 7, 2024 : Saratoga County Amateur Radio Association, Saratoga County Hamfest, Saratoga County Fairgrounds, 162 Prospect Street, Ballston, NY. **www.k2dll.org**

September 14, 2024 : Wayne Radio Amateur Emergency Team, WRAET Hamfest & Electronics Fair, United Methodist Church, 99 Parish Drive, Wayne, NJ. **www.wraet.com**

September 28, 2024 : Garden State Amateur Radio Association, Hamfest, MOESC Parking Lot, 100 Tornillo Way, Tinton Falls, NJ. **www.gsara.club**

Route 66 On The Air Special Event

Saturday, September 7, 2024 to Sunday, September 15, 2024

www.w6jbt.org

Masonic Lodges On The Air

Saturday, September 28, 2024

www.cqmorelight.com

New Jersey QSO Party

Sponsored by
Burlington County Radio Club
K2TD

Saturday, September 21, 2024 : 1000 to 2200 Hours
http://www.k2td-bcrc.org/njqp

The Education Connection
By Chris Prioli, AD2CS - chris@ad2cs.com
www.ad2cs.com

September 2024

The end of the summer brings us closer to some important September events… like the GCARC Hamfest (8 September), the Bike MS Ride (28 & 29 September), and… oh yeah… the start of the next session of GCARC Ham License Exam Preparation Classes.

Session VIII, the Fall 2024 session, is set to run as follows :

Level	Element	Held On	First Meeting	Exam Date
Technician	**2**	**Mondays**	**9 September**	**18 November**
General	**3**	**Tuesdays**	**10 September**	**19 November**
Amateur Extra	**4**	**Fridays**	**13 September**	**22 November**

Registration is now open, and the classes are posted on the ARRL website. At this point, I have only three students for the Element 2 class and another three students for the Element 3 class. I would like to see *many more* enrollees, and I would especially like to see some folks come out to upgrade their tickets to the Amateur Extra level. There was <u>no</u> Element 4 enrollment in the past two sessions. It stands to reason that some of the new Generals out there would want to upgrade to the Extra level. Now is the time to do it!

I apologize to those who attended the last Tech Saturday, wherein my laboratory VNA decided not to cooperate. I finally tracked the problem down to a firmware upgrade issue, and all is now well again. If anyone is interested in seeing what I was planning to demonstrate in that session, let me know and I will set up an informal demonstration on a Saturday morning at the Clubhouse.

While I am asking for feedback from the readers, here's another one…

I am looking for another small project build that we can once again do as a group, and I am open to suggestions as to what that project should be. Please drop an email to me with any ideas that you may have for a small to medium project that would be a useful piece of equipment for our Club members. Put on your thinking caps and open up your wish books. Come up with some ideas that I can consider and then maybe develop into a group project build as we have done in the past. Those sessions were very well accepted and attended, and I would like to continue the trend.

That's it for now… see you next month!

OPERATING TIP

In contests, you often come across operators with "enthusiasm for working calls as quickly as they can, who speak so fast that they are unintelligible." Operators should take the time to speak clearly and slowly so that potential QSOs are not lost due to the fact that the caller is not able to understand what the operator is saying.

Tuesday AfterNoon Net @ 1200 Hours

Net Control Stations :
Steve Farney, W2SEF; Chris Prioli, AD2CS; Rich Subers, W2RHS,
Greg Ciraula, W5DO; & Jeff Garth, WB2ZBN

147.180 MHz (+) (131.8) Repeater & EchoLink W2MMD-R

Here is the schedule for the upcoming weeks

Steve Farney, W2SEF : September 3, 2024
Chris Prioli, AD2CS : September 10, 2024
Greg Ciraula, W5DO : September 17, 2024
Rich Subers, W2RHS : September 24, 2024

Greg Ciraula, W5DO : October 1, 2024
Chris Prioli, AD2CS : October 8, 2024
Steve Farney, W2SEF : October 15, 2024
Rich Subers, W2RHS : October 22, 2024
Jeff Garth, WB2ZBN : October 29, 2024

Greg Ciraula, W5DO : November 5, 2024
Chris Prioli, AD2CS : November 12, 2024
Steve Farney, W2SEF : November 19, 2024
Jeff Garth, WB2ZBN : November 26, 2024

Greg Ciraula, W5DO : December 3, 2024
Chris Prioli, AD2CS : December 10, 2024
Rich Subers, W2RHS : December 17, 2024
Christmas Eve : December 24, 2024
New Year's Eve : December 31, 2024

If you would like to be a Net Control Station for this net, please contact Steve Farney, W2SEF

Thursday Night Rag Chew Net @ 2000 Hours

Net Control Stations :
Chris Prioli, AD2CS; Mary Delemarre, W2TDS; Gary Mirkin,
WA3SVW; Steve Farney, W2SEF; & Jeff Garth, WB2ZBN

147.180 MHz (+) (131.8) Repeater & EchoLink W2MMD-R

Here is the schedule for the upcoming weeks :

Chris Prioli, AD2CS : September 5, 2024
Mary Delemarre, W2TDS : September 12, 2024
Gary Mirkin, WA3SVW : September 19, 2024
Steve Farney, W2SEF : September 26, 2024

If you would like to be a Net Control Station for this net, please contact Jeff Garth, WB2ZBN

Gloucester County Skywarn Net

The Gloucester County Skywarn Net is held every Sunday @ 1930 Hours on the 147.180 MHz (+) (131.8) Repeater & EchoLink W2MMD-R

All Are Welcome To Participate

Net Control Stations : Steve Bromhead KB2RTZ, Bob Keogh KD2NEC, Charlie Wahl, KC2STO, & Jeff Garth WB2ZBN

Gloucester County ARES Net

The Gloucester County ARES Net is held every Sunday @ 2000 Hours on the 147.180 MHz (+) (131.8) Repeater & EchoLink W2MMD-R

All are welcome to participate

Net Control Stations : Steve Farney W2SEF, Greg Ciraula W5DO, Bob Keogh KD2NEC, Karl Frank W2KBF, Al Arrison KB2AYU, Gary Mirkin WA3SVW, & Todd Woodward KD2ESH

Anyone who is interested in joining the Gloucester County ARES Team, is invited to contact Bob Keogh at KD2NEC @ QSL.NET

"Dinner @ The W2MMD Clubhouse"
Wednesday, September 25, 2024 @ 1800 Hours
W2MMD Clubhouse

ARRL Learning Center
https://learn.arrl.org

Discover how to make Amateur Radio your own.

Online courses from the ARRL Learning Center provide ARRL members with additional instruction and training for getting on the air, emergency communications, and electronics and technology

Current Website Updates : Go to this page to find out the latest changes & updates on our W2MMD Website
https://gloucestercountyarc.weebly.com/current-website-updates.html

At The Repair Bench…
A monthly column describing a recent repair bench event.
By Chris Prioli, AD2CS - chris@ad2cs.com - www.ad2cs.com

Astron VS-35M Power Supply- September 2024

Not too long ago, I was asked to take a look at an **Astron VS-35M Power Supply** that was exhibiting current drop-out under high-current demand periods. The PSU would drop out and then simply reset itself, with no blown fuses or other indications of excessive current draw. There is a single SCR used in the PSU, and the owner suspected that the SCR may have been the cause of the problem, but in reality, the SCR is in the crowbar overvoltage protective circuit. If the crowbar circuit were to be activated, the fuse should blow, as the effect is that of dropping a crowbar across the output, creating a dead short across the PSU output.

Figure 1 : Astron VS-35M Power Supply Unit

I tested the operation of the unit and found it to be as described. When I tried to draw as little as ten amperes from the supply, it would drop out and reset itself. I quickly eliminated the pass transistors as the cause of the problem, both by thermal evaluation and by static testing of the easily-removed TO-3 devices. I further tested the driver transistor for the pass network, and it too tested OK. At this point, I suspected that the culprit was the LM723 voltage regulator IC. For the sake of being able to answer the owner's anticipated questions, I took a few minutes and tested each of the semiconductor devices used in the PSU, largely by desoldering one end of each diode, and by removing the transistors and SCR for out-of-circuit testing. All semiconductor devices tested out OK *except for the crowbar SCR!* A viable SCR should latch in its conduct-
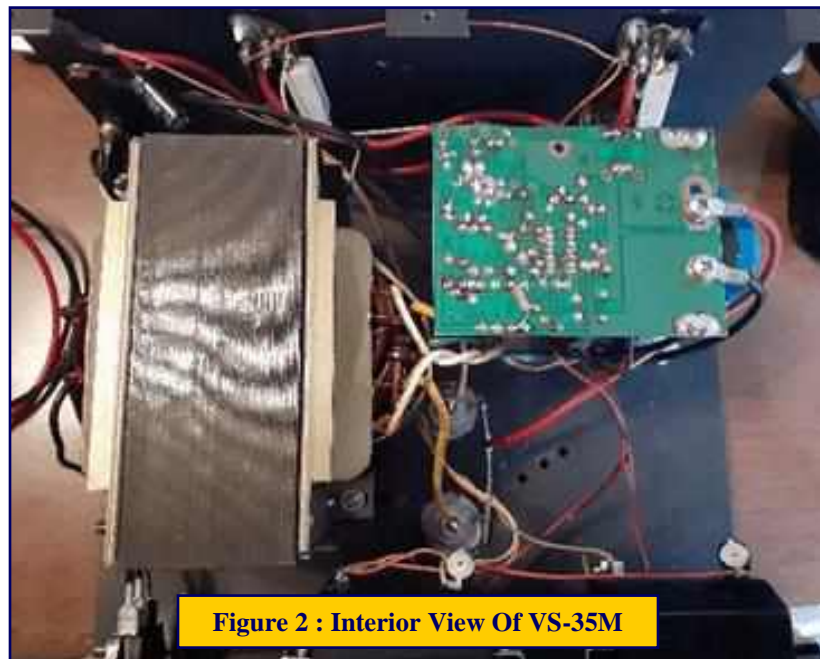
Figure 2 : Interior View Of VS-35M

ing mode if the gate and anode are shorted momentarily. In this case, the SCR went into conduction, but failed to latch in that state. Needless to say, I replaced the SCR, though it clearly was not the cause of the specific reported problem.

Among the various Astron schematics available online is a pair of VS-35M schematics, both of which provide similar if not exact listings of the "normal" voltages for the LM-723 regulator. Under initial testing, all of the IC voltages checked out OK, but as I ramped up the load on the power supply, the voltages started to go awry.

On the LM723, Pin 3 is the "current sense" pin, which is tied to the PSU output, and should range between 13.87VDC (no-load) and 13.7VDC (full load). Pin 2 is the "current limit" pin, and is tied in a roundabout manner to the crowbar circuit, and it should range between 13.1VDC (no load) and 14.0VDC (full load). Pin 10 is the regulator output pin, which drives the TIP-29 pass transistor driver. It should range between 14.8VDC (no-load) and 16.5VDC (full load). While the current sense and current limit voltages were basically where they belonged, as the load went up, the output voltage on Pin 10 would sag way down, eventually dropping to 1.5VDC when a full load was initially applied, and then the PSU dropped out. The cure was a replacement of the LM723 voltage regulator IC.

Along the way, I discovered that the 2200µF 16V electrolytic capacitor across the output **(See Figure 4)** was also very leaky. I replaced that capacitor as well as the other small electrolytics that were on the PCB. The 64,000µF main filter capacitor tested OK, and so was left alone.

In post repair testing, the PSU performed flawlessly, so I put this one to bed as a job well done. Using an electronic load test unit, I was able to draw 30 amperes successfully for a thirty-minute period following a 50% duty-cycle pattern. The PSU is rated at 25 amperes at a 100% duty cycle and 35 amperes at a 100% duty cycle. I repeatedly ran the load up to 35 amperes with no drop-out noted.

One final note. The schematic diagram **(See Figure 5)**, as drawn by the factory, looks strange at first glance, until the technician realizes that the supply side is nothing more than a pair of nested supplies fed through full-wave rectifier circuits. It just looks odd because we are accustomed to seeing separate secondary windings rather than nested winding pairs. It is nonetheless a straightforward pair of full-wave circuits, one inside the other in the diagram.

See you next month!
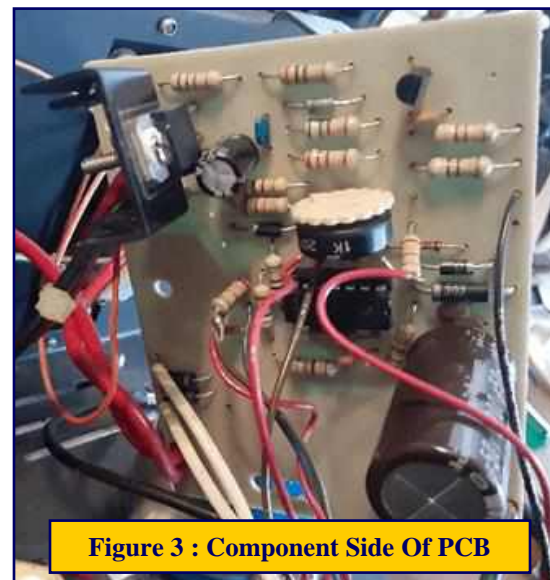
Figure 3 : Component Side Of PCB
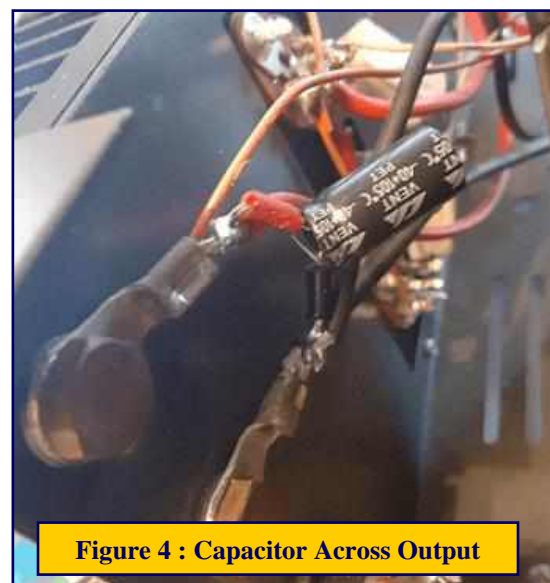
Figure 4 : Capacitor Across Output
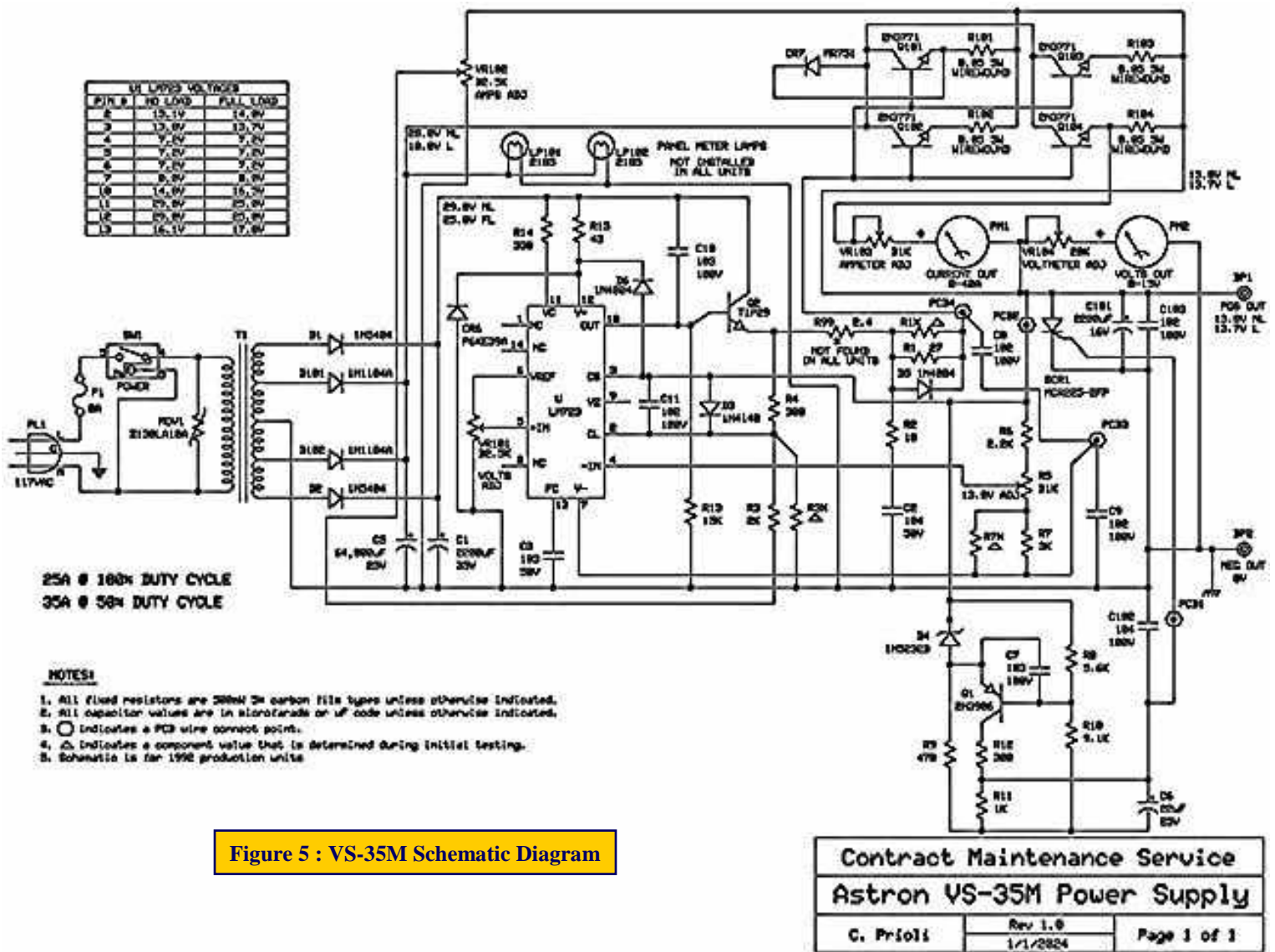
Figure 5 : VS-35M Schematic Diagram

NTS Resources

The National Traffic System® (NTS) is a network of Amateur Radio operators who move information during disasters and other emergencies. General messages offering well wishes also move through the NTS to help test the system and to help amateur radio operators build traffic handling skills. While the NTS is primarily set up to serve the United States and Canada, it is possible to move traffic internationally through the NTS through various local, regional, area, and international network connections.

- **NTS 2.0 : https://nts2.arrl.org**
- **NTS Manual : https://www.arrl.org/nts-manual**
- **NTS Methods and Practices Guidelines Table of Contents : https://www.arrl.org/table-of-contents-nts-methods-and-practices-guidelines**
- **Handling Instructions : https://nts2.arrl.org/hx-handling-instructions**
- **Numbered Texts : https://nts2.arrl.org/numbered-texts**
- **Form Encoding Rules for Form : https://nts2.arrl.org/form-encoding-rules-for-forms**

Club Member	DMR ID
W2MMD Clubhouse	**3198604**
Michael Andrescavage, N2ICV	**3134044**
Lance Appel, KE2UC	**3200487**
Alex Calabrese, WA2ADS	**3100583**
Chuck Capasso, WB2PGE	**3169781**
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Mark Clark, N3QMJ	**3102110**
Holden Correia-Fisher, KD2JPV	**3104911**
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Walter Coward, WX2E	**3166863**
Bob Demola, KD2GFL	**3134319**
Doug Dersch, KD2VQA	**3193630**
Thomas Distelcamp Sr, KC2GYC	**3110869**
Glenn Dougherty, N2YIO	**3161836**
Adam Duncan, W3DUN	**3202691**
Herb Dyer, KT2Y	**3134907**
Harry Elwell, AD5TT	**3128498**
James Foster, W3JNF	**3142117**
Karl Frank, W2KBF	**3146716**
Glen Guenther, KE2BUO	**3202079**
Melissa Guenther, KE2BWZ	**3202496**

Club Member	DMR ID
Deirdre Anne Hebert, AD2GQ (AB1ST)	**3133330**
Gary Mirkin, WA3SVW	**3165494**
John Murrow, KD2NHK	**1134122**
Phil Nunzio, WA3RGY	**3134336**
John O'Connell, K2QA	**3110610**
Robert Pantazes, W2ARP	**3157208**
Jonathan Pearce, WB2MNF	**3163415**
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Michael Pentimall, KC3VTF	**3203601**
John Price III, KD2QYC	**3123583**
Chris Prioli, AD2CS	**3195449**
Michael Resnick, N2WOQ	**1134013**
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Len Rust IV, K2LJR	**3196243**
Dave Sheppard, W2PAX	**3112666**
Cory Sickles, WA3UVV	**1142052**
James Simeone, KC2AOF	**3134848**
Court Smith, KD2SPJ	**3186243**
Jackson Snyder, AI2D	**3164371**
Rich Subers, W2RHS	**3204316**
Brett Waller, K2BKW (KC2UXQ)	**3134261**
Bill Wood, KD2OSJ	**3197459**
John Zaruba Jr, K2ZA	**3134331**

For more information, DMR links, and W2LJR's DMR presentations, go to :
https://gloucestercountyarc.weebly.com/dmr.html

CrossTalk Submissions

This is your Club Magazine. Make use of it.

If you have stories or photos of your hobby that you would like to share with the Club, please do so!

We will keep covering all of the GCARC events, but it is also nice to get those personal perspectives to include in every issue. Connecting through experiences is what makes the Gloucester County Amateur Radio Club a *REAL* Club.

All submissions, queries, comments, and editorials should be addressed to :
Jeff Garth, WB2ZBN at djgrath1 *<at>* gmail *<dot>* com

Submission deadline for the October 2024 issue : Friday, September 20, 2024

Club Website www.w2mmd.org
Club E-Mail Reflector : GCARC *<at>* Mailman *<dot>* QTH *<dot>* Net

DMR Configuration Sequence

1. **Obtain and Configure DMR ID :**
   - **https://www.radioid.net**
2. **Download Contact List :**
   - **http://www.dmrcontacts.com**
3. **Identify Repeater or Hotspot :**
   - **https://www.repeaterbook.com**
4. **Define Talk Groups**
   - **Numerical ID**
   - **Text Name**

https://brandmeister.network/?page=talkgroups

5. **Create Channel**
   - **Select Number**
   - **Assign Name**
   - **Select DMR ID**
   - **Assign Frequency**
     - **Transmit**
     - **Receive**
     - **Bandwidth**
     - **Power**
     - **DMR Mode (Simplex/Repeater)**
     - **TX Permit (Channel Free)**
   - **Assign Talk Group**
   - **Assign Color Code**
     - **Agreed Upon with Other Users**
   - **Assign Time Slot**
   - **Agreed Upon with Other Users**

6. **Create Zone**

7. **Add Channels to Zones**

8. **Configure Features**

9. **Upload Code Plug**

10. **Upload Contact List**

If you recently changed your callsign, contact idteam@dmr-marc.net to have your DMR ID transferred to your new callsign.

ARES Resources

Download the ARES Manual [PDF] : https://bit.ly/3iUhJLQ
ARES Field Resources Manual [PDF] : https://bit.ly/3QT4PtY
ARES Standardized Training Plan Task Book [Fillable PDF] : https://bit.ly/3wg5kVt
ARES Standardized Training Plan Task Book [Word] : https://bit.ly/3ZTNDbR
ARES Plan : https://bit.ly/3XLokXH
ARES Group Registration : http://bit.ly/3XodGpX
Emergency Communications Training : http://bit.ly/3J2gMMf
2022 National Preparedness Report : https://bit.ly/3EnvcTW
Southern New Jersey Section EOP 2022.PDF : https://bit.ly/3SbrXol

The Amateur Radio Emergency Service® (ARES) consists of licensed amateurs who have voluntarily registered their qualifications and equipment, with their local ARES leadership, for communications duty in the public service when disaster strikes. Every licensed amateur, regardless of membership in ARRL or any other local or national organization is eligible to apply for membership in ARES. Training may be required or desired to participate fully in ARES. Please inquire at the local level for specific information. Because ARES is an amateur radio program, only licensed radio amateurs are eligible for membership. The possession of emergency-powered equipment is desirable but is not a requirement for membership.

If you are interested in learning more about the Gloucester County ARES Program or becoming an ARES member, please contact Bob Keogh (KD2NEC@QSL.NET)

And Now It's Superfox Mode. First Impressions!
By Jim Wright, N2GXJ

The digital modes have been a great equalizer in HF ham radio, allowing those with modest stations at low power to be able to enjoy making radio contacts with far off places at signal levels so low they would challenge even the most experienced CW operator. When a ham radio station is spotted on the air from a rare and distant location, it causes some excitement in the ham radio community amongst those who like to chase getting confirmed contacts from places they don't already have in their logs. For some, chasing DX (distance) is a fun part of the hobby. For some, it can borderline on obsession! Ever hear of a "DX expedition" (DXpedition for short)?

From time to time, a group will get together to pay to send a team of hams and their equipment on an expedition to activate a rarely contacted place, for the sole purpose of getting confirmed contacts from there. When this happens, an on-air feeding frenzy of sort happens. In radio terms they call them pile-ups, where the DX station calls CQ and hams from all over the United States and the world all try to get that DX station's attention at the same time. You can see the problem. It takes time to complete an exchange in order to have a confirmed contact. And the DX station can only complete so many exchanges per hour. So there's going to be a lot of frustrated people, including some who helped fund the DXpedition, who are not going to get through on a given day before their propagation changes, or before the DX team has to pack up and come home. So what can be done?

An answer has always been to try to find ways to increase the QSO rate of the DX station, so that they can confirm more contacts per hour. Yet getting higher QSO rates has been a problem for those wanting the weak signal benefits of digital modes like JT64 and FT8 to chase DX. When the weak signal modes were introduced, the emphasis was on improving the weak signal performance (duh), not QSO rates. Hence these digital modes were not favored by DXpeditions, where much higher QSO rates (to paying customers) could be achieved on HF using traditional voice and CW methods. But things have progressed technologically since then.

A big step forward happened in 2018 when the now common Fox-Hound sub mode for FT8 was introduced in time to be used with the Baker Island DXpedition that year. With this innovation, the DX station was now able to conduct multiple FT8 QSO simultaneously in the same transmit signal using a shortened exchange sequence for each, greatly improving the potential QSO rate per hour for the DX station. Multi-stream innovations continued from there, such as with the introduction of MSHV, allowing for more QSO to be conducted in parallel by the DX station, across a wider portion of the receive passband. There was a downside tradeoff, though, with multi-stream. For each parallel stream the DX station transmitted, its TX power would be effectively split between each of those streams, limiting the number of stations that would be able to successfully hear and decode the transmissions needed to complete a QSO. For this reason, many DXpeditions would limit their number of TX streams to less than what the software could support - still an improvement over straight FT8 mode, but leaving room for QSO rate improvement.

Which brings us up to the introduction of the "Superfox" special operating mode! This WSJT-X option, used in conjunction with FT8 in the Fox-Hound (F/H) setting, changes the DX station's transmissions from the familiar multi-stream FT8 to a new signal type, that when you hear it, sounds like a rapidly frequency hopping sequence of tones over 1.5 kHz of the audio channel bandwidth.

As shown in the **Figure 1**, you can see this new signal type from the DX station looks quite different on the waterfall when compared with the familiar FT8 transmissions us hounds are sending.
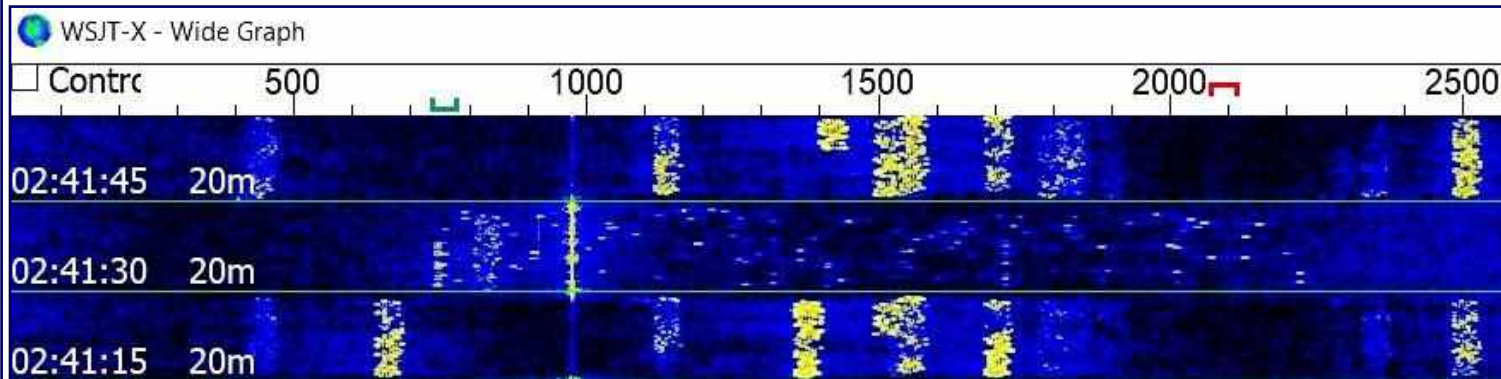
Figure 1 : N5J Palmyra & Jarvis' Superfox Transmissions - Visibly Different From FT8

So why use this transmission type? What are the reported advantages for the DXpedition? In short, there's an ability to increase the number of simultaneous QSO in progress, with no reduction in RX signal strength for the receiving stations as number of streams increases. Nice trick! This has the potential to increase the QSO rate for the DX station, making everyone who wants confirmed contacts with that DX station happier. And there's more. There's also a digital signature embedded in the transmission. Consider this a "security check", allowing you to have some assurance that you are decoding and attempting to contact the legitimate DX expedition (and not some pirate). Sweet feature!


```
----------------------------------------------- 20m
023230     2    0.1    742  ~    CO6HLP N5J RR73
023230     2    0.1    742  ~    CX7SS N5J RR73
023230     2    0.1    742  ~    N2GXJ N5J RR73
023230     2    0.1    742  ~    NL7R N5J -09
023230     2    0.1    742  ~    N7TM N5J +12
023230     2    0.1    742  ~    AD5XD N5J +12
023230     2    0.1    742  ~    W7GT N5J +12
N5J verified                          Verified as real N5J
```
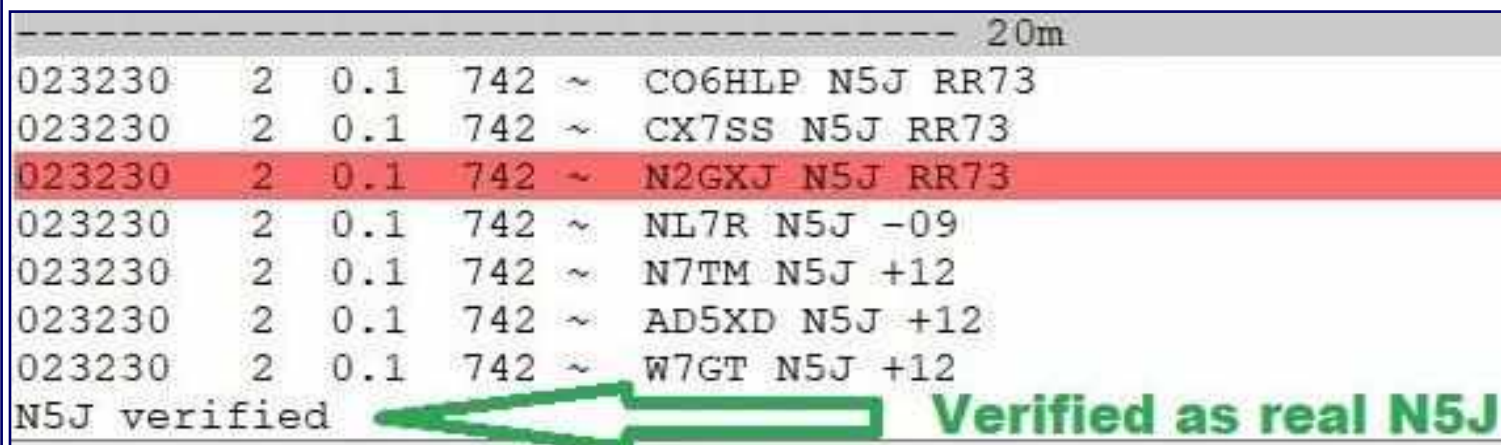
Figure 2 : RX Of 7 Simultaneous QSO From N5J Each At Strong +2 db Strength, With Source Verification

Any disadvantages? Some have been complaining of inconsistency in getting decodes. Enough so that during the DXpedition, the N5J team decided to drop Superfox mode and go back to standard multi-stream FT8 on some bands. Perhaps it was aurora conditions? Or something else? I'm sure they'll work to figure that out. Worth noting that there were not as many complaints seen on the message boards for CW, where signals were getting through, even with Aurora conditions.

Propagation conditions may have contributed to the difficulty in some decodes, but there may have been some setup issues as well. At least there were in my case. For the longest time, I had trouble getting any decode of the Superfox signal. That was until I learned that to properly decode this new signal type, you really do have to set the dial frequency to the DX stations' dial frequency. That was new to me. With MSHV, often I'd tune a little lower in frequency, to get better decodes and was doing the same assuming it would work for N5J in Superfox mode, but it did not. I could decode everyone calling them, but could never see them decoded. That is until I changed the dial frequency to 14.091 MHz, not 14.090 MHz. Took me over a day to figure that one out!

I expect we'll see a few more tweaks to Superfox before the year's out, then who knows what will be next as the quest to finding ways to achieve higher QSO rates continues. Let the innovations roll!

GCARC Ham Exam Preparation Class Schedule
2024 Session VIII - Class Times : 1800 - 2100 Hours
Weeks 1 through 10 + Review & VE Testing Week

Class Week	Class Date	License Class Study
Week 1	Monday, September 9, 2024	Technician Class
Week 1	Tuesday, September 10, 2024	General Class
Week 1	Friday, September 13, 2024	Amateur Extra Class
Week 2	Monday, September 16, 2024	Technician Class
Week 2	Tuesday, September 17, 2024	General Class
Week 2	Friday, September 20, 2024	Amateur Extra Class
Week 3	Monday, September 23, 2024	Technician Class
Week 3	Tuesday, September 24, 2024	General Class
Week 3	Friday, September 27, 2024	Amateur Extra Class
Week 4	Monday, September 30, 2024	Technician Class
Week 4	Tuesday, October 1, 2024	General Class
Week 4	Friday, October 4, 2024	Amateur Extra Class
Week 5	Monday, October 7, 2024	Technician Class
Week 5	Tuesday, October 8, 2024	General Class
Week 5	Friday, October 11, 2024	Amateur Extra Class
Week 6	Monday, October 14, 2024	Technician Class
Week 6	Tuesday, October 15, 2024	General Class
Week 6	Friday, October 18, 2024	Amateur Extra Class
Week 7	Monday, October 21, 2024	Technician Class
Week 7	Tuesday, October 22, 2024	General Class
Week 7	Friday, October 25, 2024	Amateur Extra Class
Week 8	Monday, October 28, 2024	Technician Class
Week 8	Tuesday, October 29, 2024	General Class
Week 8	Friday, November 1, 2024	Amateur Extra Class
Week Nine	Monday, November 4, 2024	Technician Class
Week Nine	Tuesday, November 5, 2024	General Class
Week Nine	Friday, November 8, 2024	Amateur Extra Class
Week 10	Monday, November 11, 2024	Technician Class
Week 10	Tuesday, November 12, 2024	General Class
Week 10	Friday, November 15, 2024	Amateur Extra Class
Week 11	Monday, November 18, 2024	Technician Class Review & Exam
Week 11	Tuesday, November 19, 2024	General Class Review & Exam
Week 11	Friday, November 22, 2024	Amateur Extra Class Review & Exam

A No-Holes Radio Installation
By Karl Frank, W2KBF

I often hear Radio Amateurs on the air who operate from their vehicles using 5-watt HTs with stock rubber antennas. This only works well if they are within few miles of a repeater and I understand the reluctance to drill holes in the vehicle for a better installation. When it was time to replace my venerable Mercury Marquis with a newer vehicle, I took on the challenge of installing my 50-watt Yaesu dual band radio without drilling of holes or doing anything else that would void the factory warranty on my new vehicle.

Here is my solution :

1. The biggest challenge is to get power to the radio. Ideally, we want to take power directly from the 12 volt starter battery, but this requires running wires thru the firewall. Some vehicles may provide a suitably located rubber grommet, but I was out of luck. After poking around under the hood, crawling under dashboard until my back hurt and watching a few YouTube videos I could not find a good way to route wires to the battery for power. Therefore, I decided to mount a storage battery inside the passenger compartment of my vehicle and use an accessory outlet to maintain a charge.

My Yaesu FTM-400 draws about 10 A when transmitting with full power so I needed a battery that could handle that current. After considering several battery chemistries, I selected a 15 Ah LiFePO$_4$ battery pack from Powerwerx (shown to the right in the orange plastic box). A carabiner attaches to a tie point in the rear of my vehicle and keeps the battery box in place. A 3 Amp step-up mobile charger for LiFePO$_4$ batteries (from Paradan Radio) attaches to the battery box with Velcro and plugs into a nearby accessory outlet, keeping the battery charged. This accessory outlet provides power only when the vehicle is running so there is no danger of depleting the starter battery. This battery/charger combination is free of ripple and the LiFePO$_4$ battery will stay charged as long as I spend more time listening than transmitting.

2. **Mounting the Radio :** The FTM-400 has a removable control head, so I purchased a cup holder mount from Lido that places the controls in a convenient location. The body of the radio is mounted with Velcro to the carpeted floor behind the driver and front passenger seats. From this low position, the radio is unlikely to become a dangerous flying object. The stock microphone cable was too short to reach the radio from the driver's position so I routed an extension cable thru the center arm rest. So far, I have not found the need to mount a speaker near the control head.

3. **The antenna solution was easy (maybe too easy) :** A thru-glass model from Larsen. I have used these for years with new vehicles when I did not want to drill holes or use mag mounts. The disadvantage these days is that many contemporary vehicles, including mine, have tinted windows and the composition of the window tint may affect antenna efficiency. Still, it is better than using a rubber duckie antenna inside the car.

Observations :

I like the cup holder mount from Lido and can recommend it for mounting radio control heads. I had concerns that the GPS receiver in the control head would not find satellites when mounted this low, but it has been working OK. The LiFePO$_4$ battery and charger were expensive, but work well. One significant drawback is that LiFePO$_4$ batteries cannot be charged when the temperature goes below freezing, so I may have to switch to a Sealed Lead Acid battery before Winter OR swallow my DIY pride and pay someone with relevant expertise to route wires thru the firewall.

The thru-glass antenna was a disappointment. After using it for about a month, I placed a Larsen mag mount antenna on the center of my roof and found that the mag mount antenna works much better. The RG-58 coax is routed thru my tailgate without being crushed so I still have a good no-holes installation.

Have I described a great radio installation? No, it is a compromise but it is much better than driving around with just a 5-watt HT. I hope that some of these ideas will be useful to people who are reluctant to install mobile radios in their vehicles.

SEPTEMBER IS PROSTATE CANCER AWARENESS MONTH

W2MMD HF Local Station

2024-2028 Element 4 Amateur Extra Class License Question Quiz

This month we continue with Subelement E1 Commission Rules (6 exam questions - 6 groups).
(Answers on 'Last Page Calendar')

E1C01
What is the maximum bandwidth for a data emission on 60 meters?
A. 60 Hz
B. 170 Hz
C. 1.5 kHz
D. 2.8 kHz

E1C02
Which of the following apply to communications transmitted to amateur stations in foreign countries?
A. Third party traffic must be limited to that intended for the exclusive use of government and non-Government Organization (NGOs) involved in emergency relief activities
B. All transmissions must be in English
C. Communications must be limited to those incidental to the purpose of the amateur service and remarks of a personal nature
D. All these choices are correct

E1C03
How long must an operator wait after filing a notification with the Utilities Technology Council (UTC) before operating on the 2200-meter or 630-meter band?
A. Operators must not operate until approval is received
B. Operators may operate after 30 days, providing they have not been told that their station is within 1 kilometer of PLC systems using those frequencies
C. Operators may not operate until a test signal has been transmitted in coordination with the local power company
D. Operations may commence immediately, and may continue unless interference is reported by the UTC

E1C04
What is an IARP?
A. A permit that allows US amateurs to operate in certain countries of the Americas
B. The internal amateur radio practices policy of the FCC
C. An indication of increased antenna reflected power
D. A forecast of intermittent aurora radio propagation

E1C05
Under what situation may a station transmit third party communications while being automatically controlled?
A. Never
B. Only when transmitting RTTY or data emissions
C. Only when transmitting SSB or CW
D. On any mode approved by the National Telecommunication and Information Administration

E1C06
Which of the following is required in order to operate in accordance with CEPT rules in foreign countries where permitted?
A. You must identify in the official language of the country in which you are operating
B. The US embassy must approve of your operation
C. You must have a copy of FCC Public Notice DA 16-1048
D. You must append "/CEPT" to your call sign

E1C07
What notifications must be given before transmitting on the 630- or 2200-meter bands?
A. A special endorsement must be requested from the FCC
B. An environmental impact statement must be filed with the Department of the Interior
C. Operators must inform the FAA of their intent to operate, giving their call sign and distance to the nearest runway
D. Operators must inform the Utilities Technology Council (UTC) of their call sign and coordinates of the station

E1C08
What is the maximum permissible duration of a remotely controlled station's transmissions if its control link malfunctions?
A. 30 seconds
B. 3 minutes
C. 5 minutes
D. 10 minutes

E1C09
What is the highest modulation index permitted at the highest modulation frequency for angle modulation below 29.0 MHz?
A. 0.5
B. 1.0
C. 2.0
D. 3.0

E1C10
What is the maximum mean power level for a spurious emission below 30 MHz with respect to the fundamental emission?
A. - 43 dB
B. - 53 dB
C. - 63 dB
D. - 73 dB

E1C11
Which of the following operating arrangements allows an FCC-licensed US citizen to operate in many European countries, and amateurs from many European countries to operate in the US?
A. CEPT
B. IARP
C. ITU reciprocal license
D. All these choices are correct
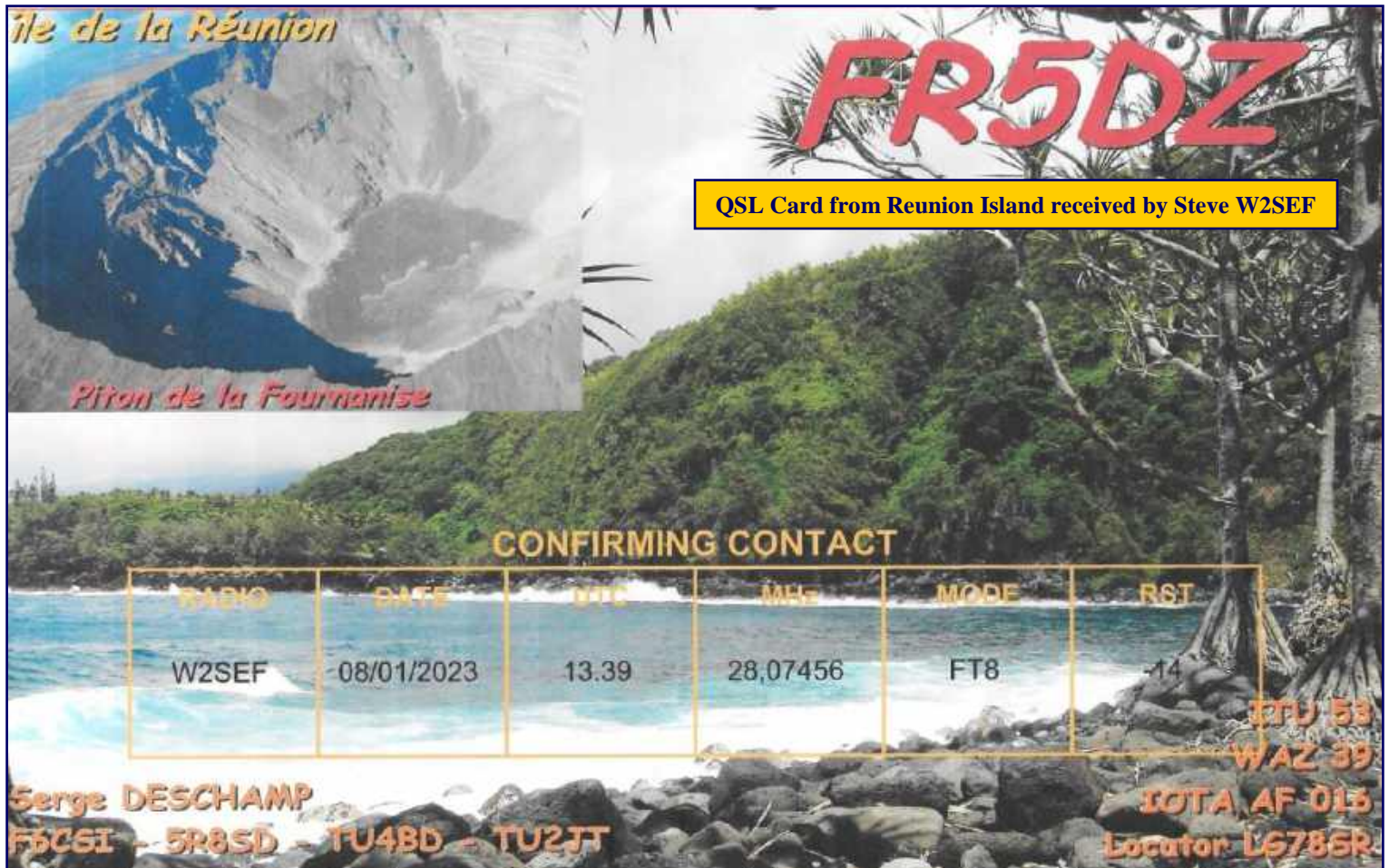
E1C12
In what portion of the 630-meter band are phone emissions permitted?
A. None
B. Only the top 3 kHz
C. Only the bottom 3 kHz
D. The entire band

QSL Card from Reunion Island received by Steve W2SEF

Monday, September 16, 2024

Lightning Protection : A Comprehensive Guide for Amateur Radio
Author : W. Ronald Block, NR2B
Contact : ron@wrblock.com
Website : www.wrblock.com

Published by the author
ISBN 978-8-9911810-0-6 (Soft-Bound)
ISBN 978-8-9911810-1-3 (Spiral-Bound)
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106 pages plus appendices and index

This month's installment of Book News once again has a rather lengthy title, but the title fully expresses the intent and content of the book.

This is a well-written treatise on a subject that has an impact on almost every amateur operator who has any kind of antenna erected. The author approaches the subject of lightning protection from a *"keep it out"* approach rather than an *"it's coming in anyway, so let's just deal with it as best we can"* viewpoint.

Terms such as *"Zone-of-Protection"* and *"Protected Side"* versus *"Unprotected Side",* and also the concept of the *"Single Point Ground Panel"* or *"SPGP"* are introduced to the reader, fully explained, and then built upon throughout the volume.

The book addresses almost every conceivable circumstance with which a radio amateur might be faced when dealing with this topic, and it is done in an easily read and even a somewhat entertaining style.

In the author's words, the book *"… brings together the pertinent information that you need to create a complete lightning protection scheme for your amateur radio station..."*

Specific topics of interest that are covered in depth in this book are :
- Understanding lightning
- Vulnerability and protection
- Single Point Ground Panel (SPGP)
- Ground system design

The author, a long-time member and now officer of GCARC, brings a lifetime of knowledge and experience to this work. Specifically, he offers the following four points :
- In-depth knowledge… he provides a high-level understanding of lightning and its impact on amateur radio stations, including historical context and scientific explanations;
- Practical solutions… he outlines practical and necessary steps to protect your radio equipment, such as creating a Single Point Ground Panel (SPGP) and implementing a comprehensive Earth ground system;
- Comprehensive coverage… he covers various aspects of lightning protection, from antenna considerations to whole-house protection, ensuring all potential vulnerabilities are addressed; and
- Expert insights, written by an experienced lightning protection consultant and adapted to amateur radio, it includes valuable insights and recommendations based on decades of expertise.
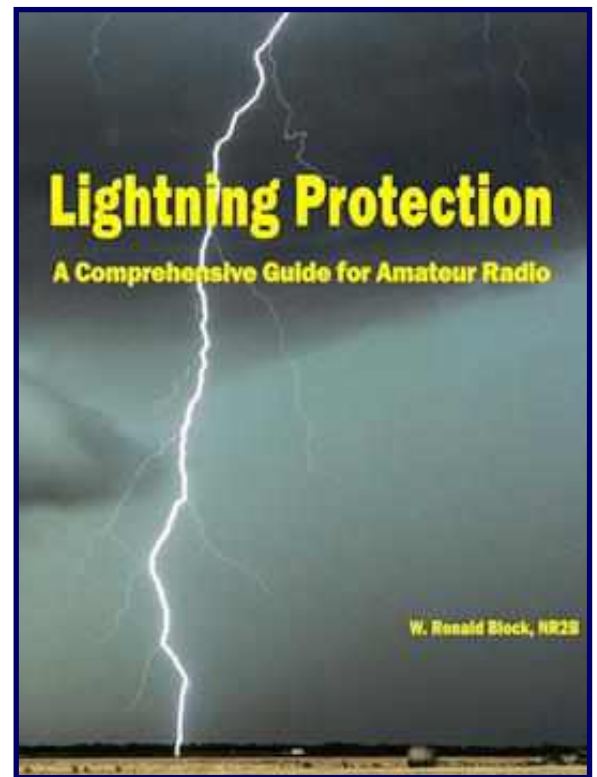
This book is available in soft cover and spiral-bound print form directly from the author, with a price tag well under fifty dollars. Most folks will go for the spiral-bound version, as it will lay flat on the table when opened to any page. This will be an excellent reference manual for any amateur to have in his or her technical library.

If you decide to try this one out, just take it slowly, allowing each portion to settle in before you go on. While it is very easy reading, it will be easier to absorb and understand the material if you follow that prescription.

73,
Chris Prioli, AD2CS

Jersey String Band Update : September 2024
By Glenn Dougherty, N2YIO

September, it's the start of Mummer Season for us and that means we start practicing for New Years Day 2025. So far, we only have a few events in September. On September 7th, we will be in North Wildwood on Old New Jersey Avenue along with the other 13 bands for the String Band Weekend starting at 3PM. Then later in September we will be helping out our sponsor the Woodbury Heights Fire Department with a fundraiser at the fire house. In between all this the band will be working very hard on their 2025 New Years music and doing what jobs come up. We have some parades coming up in October but more on that next month. Well, I think that's it for now.

Child Abduction Response Team Exercise - Thursday, October 17, 2024
By Bob Keogh, KD2NEC - kd2nec@qsl.net
Gloucester County Emergency Coordinator

The date for the **Child Abduction Response Team (CART)** exercise is Thursday, October 17, 2024

The time and location TBD.

Some examples of our tasks will be :
1. Registering additional volunteers at the Command Center
2. Delivering messages to other team members
3. Distributing food and water
4. Whatever else they need

These tasks are not the type we normally look for but, just being a part of this team is very satisfying and informative. It's a fantastic learning opportunity to participate in an Emergency Operation Center (EOC) event. All the Government Agencies will be there, with their Mobile Communications Vehicles, that we can tour.

I suggest we all carry an HT, just in case we need to communicate with one or more of our GCARC teammates. If you don't have one, we will loan one to you.

We have five or six GCARC/ARES members that have signed up for this event, but we could use a few more, in case a couple of volunteers have to cancel at the last minute.

Please take advantage of this unique opportunity by sending an email to me. I will be forwarding more information as soon as I receive it.

ARES AND THE RED CROSS EMERGENCY COMMUNICATIONS TRAILER

2024 SIMULATED EMERGENCY TEST

2024 CHILD ABDUCTION RESPONSE TEAM

There is a great deal of ARES information at this link : **http://www.arrl.org/ares-el?issue=2024-05-15**
- **ARES® Briefs, Links**
- **Storms and Tornadoes : Amateur Radio Ready**
- **ARES Supports New Hampshire Red Cross (ARC) Eclipse Standby Deployment**
- **Letters : QRP is the Way to Go**
- **Keystone 6 - National Mass Care Exercise This Month**
- **K1CE for a Final : NTS and ARES - A Symbiotic and Historic Relationship Needed Again**
- **ARES® Resources**

THE AMERICAN RED CROSS EMERGENCY COMMUNICATIONS TRAILER

The NJ Region of the American Red Cross has provided us with a 12' x 6' cargo trailer, to repurpose it into an Emergency Communications (EmComm) Trailer. The purpose is for us to provide continuous communications, using Amateur Radio equipment when commercial communications has been disrupted.

Below are a few pictures of the exterior and interior of the trailer, that show the progress of the work so far :

Trailer & Tow Vehicle

Interior Paneling

Removed Paneling

Install Insulation
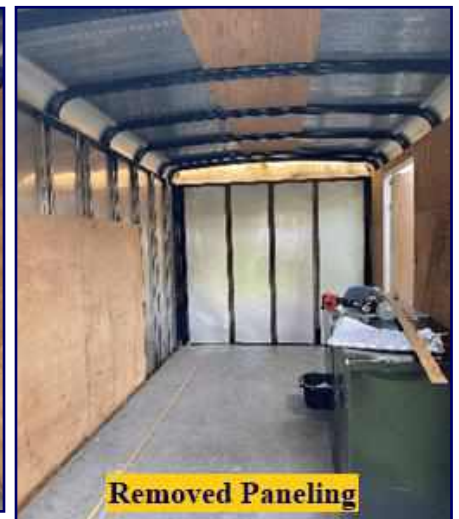
Due to the excessive heat in July, we couldn't get much accomplished and we decided that we need climate control. The first step is to insulate the interior walls before we start to build out the work table and shelving. Our goal is to have the wall insulation completed and the table in place, before the "Simulated Emergency Test" (SET) on Saturday, October 5, 2024.

The ARRL Southern New Jersey Section is working with our Served Agency, the American Red Cross, to produce the joint plan for this year's SET. We hope to have the plan ready before Labor Day Weekend, to give us time to prepare.

I'd like to thank the GCARC volunteers that have already signed-up for SET on October 5th and the Child Abduction Response Team Drill on October 17th. See below for the list. If you would like to join either or both events, please let me know.

Bob KD2NEC (609) 970-4467   Email : KD2NEC@QSL.NET

Simulated Emergency Test (SET) : Saturday, October 5, 2024

- **BOB**   **KD2NEC**   **CONFIRMED**
- **BRUCE**   **KD2LBU**   **CONFIRMED**
- **DOUG**   **KD2VQA**   **CONFIRMED**
- **KARL**   **W2KBF**   **CONFIRMED**
- **ANGELA**   **KE2DRJ**   **CONFIRMED**
- **TODD**   **KD2ESH**   **CONFIRMED**
- **GREG**   **W5DO**   **TENTITIVE**
- **ADAM**   **W3DUN**   **TENTITIVE**
- **TODD**   **KA2YNT**   **TENTITIVE**
- **COURT**   **KD2SPJ**   **CONFIRMED**

Child Abduction Response Team Drill (CART) : Thursday, October 17, 2024

- **BOB**   **KD2NEC**   **CONFIRMED**
- **DOUG**   **KD2VQA**   **CONFIRMED**
- **FRANK**   **W2FJM**   **CONFIRMED**
- **KARL**   **W2KBF**   **CONFIRMED**
- **ANGELA**   **KE2DRJ**   **CONFIRMED**
- **TODD**   **KD2ESH**   **CONFIRMED**
- **GREG**   **W5DO**   **TENTITIVE**
- **JOHN**   **K2AEN**   **CONFIRMED**
- **GARY**   **KD2EBX**   **CONFIRMED**
- **ADAM**   **W3DUN**   **TENTITIVE**
- **MELISSA**   **KE2BWZ**   **CONFIRMED**

Sunday, September 22, 2024 @ 0844 Hours

National Cheeseburger Day — September 18
www.NationalDayCalendar.com

Full Corn Moon : September 17, 2024 @ 2236 Hours

Corn was ready to harvest at this time. In the 1760s, Captain Jonathan Carver came across this Native American term during his travels. Similarly, the Western Abenaki called this the Corn Maker Moon, and the Dakota, the Corn Harvest Moon. NOTE: Harvest Moon refers to the full Moon closest to the September equinox, which is the tradition that The Old Farmer's Almanac follows. Moon When Rice is Laid Up to Dry (Dakota) refers to the time of harvesting and processing rice. Autumn Moon (Cree), Falling Leaves Moon (Ojibwe), Leaves Turning Moon (Anishinaabe), Moon of Brown Leaves (Lakota), and Yellow Leaf Moon (Assiniboine) all speak to the leaf-changing season. Child Moon (Tlingit) occurs when young animals are weaned. Mating Moon and Rutting Moon are Cree terms that describe the time when certain animals, such as moose, are ready to mate.

Old Farmer's Almanac - www.almanac.com

Remote Antenna Switch and Controller Build - Part 2
By Chris Prioli, AD2CS - chris@ad2cs.com - www.ad2cs.com

Power to the controller is 115VAC, input through a 500mA 5mmx20mm glass cartridge fuse and a SPST toggle switch, and then into a Hammond 166L16 16VAC center-tapped step-down transformer. Of course, the center tap is cut short and heat-shrink covered, as it is not used.

I decided on a hefty GBU4G bridge rectifier (because I had some on hand) and a more-than-usual post-rectifier filter to provide the truest DC input to the regulator that was possible while still maintaining a relatively inexpensive design. This filter uses a pair of 2200μF 50V axial electrolytic capacitors with a 400μH toroidal inductor in a

Pi configuration. I could have used radial capacitors, as I also had them on hand, but I wanted to keep the height profile down and I had the board real estate to fit the axial variety, so I did so.

The voltage regulator IC has 0.1μF ceramic capacitors to ground at both its input and output, and is protected by a pair of 1N4002 diodes connected as per the LM317 datasheet. The LM317 *adjust* pin is bypassed to ground via a 10μF 20V tantalum capacitor. The adjustment circuit includes a 240Ω 2W resistor (again what I had on hand) and a 5kΩ trimmer pot to provide proper adjustment range.

A blue 5mm LED, current limited via a 1kΩ 250mW resistor, is connected from the voltage regulator output to ground, and serves as a power-on pilot lamp, being panel mounted near the power switch.

A 12-position rotary switch with position-limiting capability is used as the selector switch, connected to the custom PCB via a total of seven 18AWG wires. The switch is locked in at seven positions at 30° radial intervals, as is suitable for the six-relay complement in the switching unit, with its first position being an *"OFF"* position at which none of the relays will be energized. The output to the control cable is through an eight-position Phoenix 1729076 terminal block. The two end wire positions are ground positions, while the remaining six are for the antenna switch relay inputs.

Figure 10 : Controller PCB Design
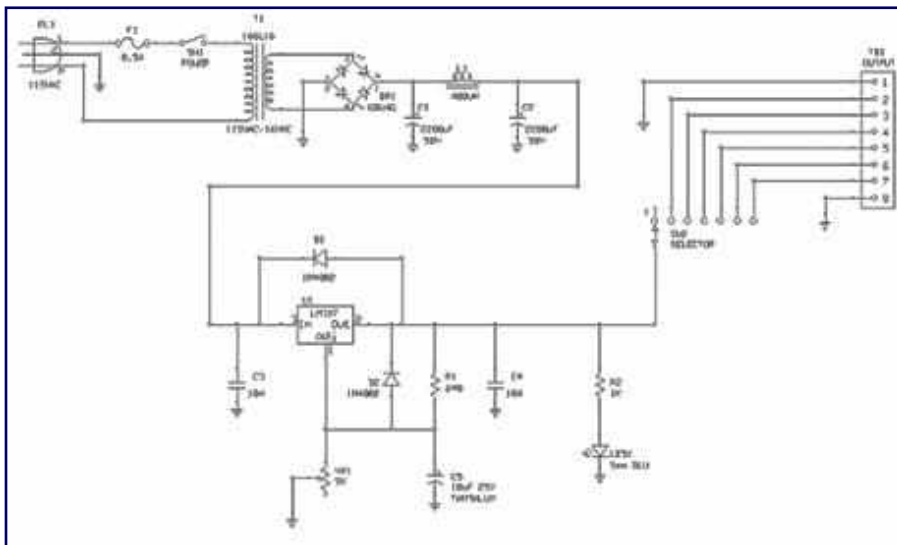
Figure 11 : Controller Schematic Diagram

As was hinted at above, I designed a custom printed circuit board for the controller, and had the boards manufactured by **jlcpcb.com**. The 2.6" x 3.8" PCB is illustrated in **Figure 10**, while the associated circuit schematic is shown in **Figure 11**.

The controller is housed in a two-piece aluminum enclosure from **Jameco Electronics (www.jameco.com)**, p/n 208911, and was labeled using self-adhesive white vinyl label stock. The label designs were created in *CorelDraw!* and printed on my color laser printer. The labels were affixed to the enclosure's front and rear panels and then the required holes were drilled through the labels and the panel. **Figure 12** illustrates the interior view of the controller unit.

The power cord is a flat three-wire 16AWG AC power cord three feet long with a NEMA 5-15P three-prong plug at one end, having its entry into the enclosure made through a Heyco 1814 strain relief. The strain relief required the drilling of a 7/16" hole that was then elongated to achieve an overall dimension of 7/16" X 5/8", appropriate for the loaded strain relief. A pair of custom-designed and printed panel supports were installed to prevent inward flexing of the rear panel when the cables are plugged into their rear-panel connections. These supports can be seen in **Figure 13**, as can the means of connecting the front panel LED to the PCB.

The PCB measures 3.8" x 2.6", and the transformer has a footprint of 3.25" x 2.00" with 2.81" between the holes in its mounting flange. With the enclosure measuring 5.9" wide and 5.3" long, it is relatively simple to position the PCB and the transformer next to each other on the floor of the enclosure. The power entry and fuse holder are installed to the enclosure rear panel, while the power switch, pilot LED, and selector switch are all on the front panel. The three-inch height of the enclosure provides plenty of headroom for the two-inch transformer height. The transformer is secured to the enclosure floor via 6-32 x 3/8" hardware including toothed lock washers and hex nuts. The PCB is installed using 4-40 x 1/2" hardware including toothed lock washers and hex nuts, and sits on #4 x 3/16" tubular nylon spacers.

The LED pilot lamp is installed, as mentioned, into the front panel near the miniature SPST toggle-type power switch. I used a two-piece mounting bushing that is installed into a 1/4" hole, with the two parts heat-welded together via the tip of a soldering iron. The LED snaps into the bushing. I chose to use a Molex KK-series 0.100" two-position female socket to connect the LED to the PCB (**Figure 13**), but wire leads could be soldered directly to the LED instead, and then covered with heat-shrink tube.

The leads to the power switch *must* be heat-shrink tube sealed due to the high voltage available there, as are the leads at the fuse holder. This is purely a matter of safety and common sense. As the schematic shows, the fuse and switch are in the transformer primary winding circuit; the secondary winding leads go directly to the PCB.

Figure 12 : Controller Interior View
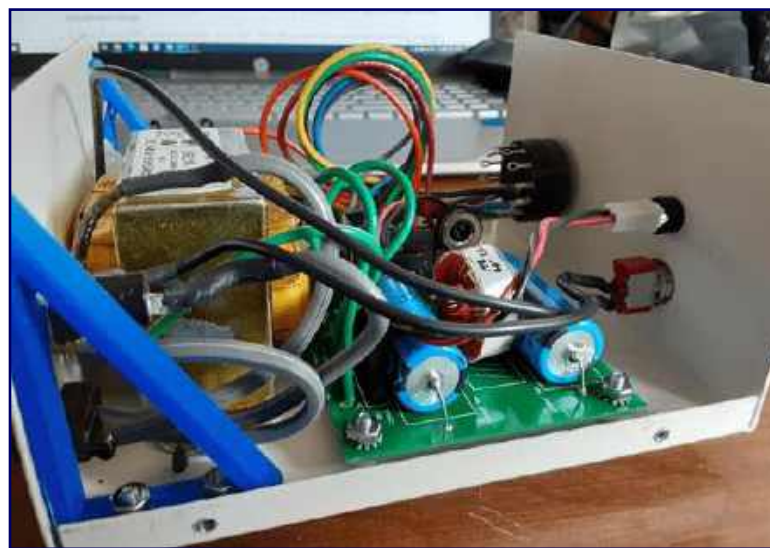
Figure 13 : Controller Side View, Showing Supports

A ground lead from the PCB to the chassis (enclosure) rear panel provides for affirmative grounding of the PCB. That ground wire is attached to an 8-32 x 1" machine screw that projects through the rear panel of the enclosure and accepts the ground connection to the shack single-point ground system, securing it there via an 8-32 wing nut. The ground lead from the incoming AC power cord is also connected at that point.

The output cabling is handled via a pair of parallel 4-conductor 18AWG sheathed cables, routed through a pair of snap-in Molex standard 0.093" 5.03mm-pitch connectors. I drilled a pair of adjacent holes at each connector location on the rear panel, and then squared the holes off to their final sizes. The controller parts list includes some Molex connector body and terminal pin numbers for extending the lengths of the output cables if single-length cables are unavailable or are cost-prohibitive.

I prepared a pair of short (three-foot) output cables for testing purposes, and I found that the system works as designed. The RF throughput is good for the entire VHF and UHF portions of the radio spectrum in which I am interested, specifically from 1.25 meters through the upper end of the 70-centimeter band. Throughput loss is negligible, with a maximum 1.025:1 VSWR measured at about 442 MHz.

While the specs are good on the switch head relays, and while they are rated for continuous duty, it remains to be seen how they will actually stand up to real-world working conditions. I am fully confident in the design and operation of the controller. The purpose of the 5kΩ potentiometer on the controller PCB is to allow final adjustment of the output voltage, so as to derive a full 12 volts at the relays with the unit installed and the output cable voltage drop in circuit. I have spoken with two other hams who have built antenna switch units based upon the PCB used in my design, and both report at least "acceptable" performance. I have agreed to build a controller for one of these folks, as he is not happy with the control solution that he is currently using.

All things considered, this was a rewarding project and one that can be undertaken by most hams with a little bit of soldering and construction know-how. The unit will do the job for which it was designed, and the controller looks good in the shack. While the switch unit could have been more compact, space was not a consideration for this outdoor item. The controller, however, is quite compact and would be easily fitted into almost any shack environment.

Switch Head Parts List			
Description	**P/N**	**Qty**	**Supplier**
Printed Circuit Board	KO4NR	1	FAR Circuits
Relay 12VDC DPDT Form 1C	AZ755-1C-12DE	6	Mouser
Diode	1N4001	6	Mouser
Connector Plug Body, Male Molex 0.093" Standard	538-03-09-2041	1	Mouser
Connector Receptacle Body, Female Molex 0.093" Standard	538-03-09-1041	1	Mouser
Crimp Terminal, Molex 18-24 ga. 0.093" Male Pin	538-02-09-2103	4	Mouser
Crimp Terminal, Molex 18-24 ga. 0.093" Female Socket	538-02-09-1104	4	Mouser
Duck Bill Vent	B07TKRM2JS	2	Amazon
SO-239 Connector, Teflon Insulated	721405422371	7	www.w5swl.com
Terminal Strip	1729050-02	2	Mouser
Capacitor 0.001µ 50V 0805 SMT Ceramic	C0805F102K5RACTU	6	Mouser
Enclosure, Serpac 9.5" x 6.35" x 2.4"	094BK	1	Digikey

Controller Parts List			
Description	**P/N**	**Qty**	**Supplier**
Transformer, 115VAC/16VAC CT Hammond 166L16	546-166L16	1	Mouser
Power Cord, 16AWG 3C NEMA 5-15P 3' long	9732SW8809	1	Southwire
Strain Relief, SR302-1 Black Heyco 1814	836-1814	1	Mouser
Switch, SPST Miniature Toggle 5A/125VAC	76523	1	Jameco
Fuse Holder, Panel Mount 5x20mm	150464	1	Jameco
Fuse GMA-type 5x20mm 0.5A Glass	102041	1	Jameco
Full Wave Bridge Rectifier, GBU4G 400V 4A	512-GBU4G	1	Mouser
Capacitor, 2200µF 50V Axial AL Electrolytic	598-228TTA050M	2	Mouser
Inductor, 400µF Toroidal Hammond 1540M08	546-1540M08	1	Jameco
Capacitor, 0.1µF MLCC	25523	2	Jameco
IC, LM317T Voltage Regulator	23579	1	Jameco
TO-220 Heat Sink Low-Profile Hat Section 1.75" x 0.70" x 0.38"	2155022	1	Jameco
TO-220 Heat Sink Installation Kit	2227284	1	Jameco
Capacitor, 10µF 20V Radial Tantalum	80-T355E106K020AT-TR	1	Mouser
Diode, General Purpose 1N4002	76961	2	Jameco
Resistor, 240Ω 2W 5% Metal Film	594-5083NW240R0J	1	Mouser
Potentiometer, 5kΩ Thumb Wheel	94706	1	Jameco
Resistor, 1kΩ 250mW 5% Carbon Film	690865	1	Jameco
LED, T1-3/4 (5mm) Blue Water Clear	2239023	1	Jameco
Terminal Strip, Phoenix 1729076-02	651-1729076	1	Mouser
LED Holder, 5mm LED Panel Mount	23077	1	Jameco
Connector Receptacle Body, Molex 0.100" KK-series	234798	1	Jameco
Crimp Terminal, Molex KK-254 22-24-ga.	736595	2	Jameco
Switch, 1P12T Rotary 350mA/30VDC Solder Lug	576501	1	Jameco
Knob, Pointer with White Line, 1/4" Shaft with Set Screw	102788	1	Jameco
Enclosure, 5.9" W x 5.3" L x 3.0" H with rubber feet	208911	1	Jameco
Connector Plug Body, Male Molex 0.093" Standard	538-03-09-2041	1	Mouser
Connector Receptacle Body, Female Molex 0.093" Standard	538-03-09-1041	1	Mouser
Crimp Terminal, Molex 18-24-ga. 0.093" Male Pin	538-02-09-2103	4	Mouser
Crimp Terminal, Molex 18-24-ga. 0.093" Female Socket	538-02-09-1104	4	Mouser
Interconnect Cable to Switching Unit	(4) 18AWG/4C Cable, PVC-jacketed x 32 feet long		
Connector Plug Body, Male Molex Mini-Fit Jr.	538-39-012-041	2	Mouser
Connector Receptacle Body, Female, Molex Mini-Fit Jr.	538-39-012-045	2	Mouser
Crimp Terminal, Molex 18-24-ga. Male Pin	538-39-000-041	8	Mouser
Crimp Terminal, Molex 18-24-ga. Female Socket	538-39-000-039	8	Mouser
PCB - Custom	Supplied by author, available for purchase		
Enclosure Panel Support - Custom	(2) Supplied by author, available for purchase		
Hardware for mounting PCB and Transformer	(4) 4-40 x 1/2" and (2) 6-32 x 3/8" sets with KEPS nuts		
PCB Mounting Spacers	(4) #4 x 3/16" white nylon tubular spacers		
Ground Connection	8-32 x 1" machine screw with flat washers, KEPS nuts, and wing-nut		

Old Barney Amateur Radio Club Founders Celebrate 50th Field Day

This year, on June 22, 2024, two longtime Old Barney Amateur Radio Club (OBARC) members in Manahawkin, New Jersey, commemorated their 50th year of participating in ARRL Field Day. Bob Schenck, N2OO, and Steve Sullivan, KZ2I, joined the club's current members for the event held at Wells Mills Park in Waretown. Notably, their first Field Day as a group occurred in Warren Grove NJ.

Following their participation in Field Day, Bob and Steve went on to establish the Old Barney Amateur Radio Club. The club's name draws inspiration from the nearby Barnegat Lighthouse, affectionately nicknamed "Old Barney." The OBARC Field Day tradition has endured ever since, and the club itself will reach its 50th anniversary in 2025.

Article by Tom Preiser, N2XW

Article Credit : ARRL Club News for August 2024 - www.arrl.org

From left to right : Steve Sullivan, KZ2I; Tom Fuhrman, WX2J; Gary N2CW (SK), and Bob Schenck, N2OO, in 1974. [Photo credit: OBARC]

Bob Schenck, N2OO (left), and Steve Sullivan, KZ2I (right), celebrating 50 years of participating in ARRL Field Day. [Tom Preiser, N2XW, photo]
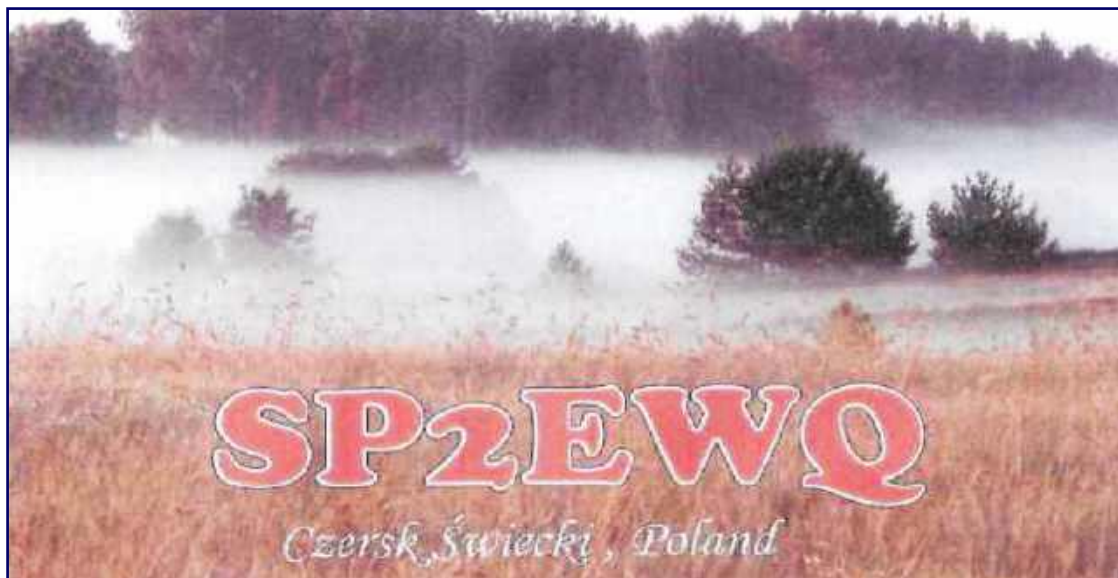
QSL Card from Poland received by Steve W2SEF

Lost and Found : EME WAC Award Application

Forty-eight years ago, the Pennsylvania-based **Mt. Airy VHF Radio Club "Pack Rats"** were experimenting with the latest amateur radio technology, Earth - Moon - Earth (EME), which became known simply as moonbounce.

While the radio equipment was pretty standard for the day, EME was not an easy technology. Moonbounce contacts required big antennas and kilowatt transmitters.

"There were a number of dedicated amateur operators in a dozen or so countries that had assembled stations capable of making the ultimate long-distance QSO with one goal in mind - to be the first to work all six populated continents on the globe, the Worked All Continents (WAC) award," said club president **Phil Miguelez, WA3NUF**.

Assembly of the dish antenna in Pennsylvania
[Photo courtesy of Phil Miguelez, WA3NUF]

The Pack Rats were early experimenters of EME communications. Thanks to a donation of a 20-foot stressed dish antenna by **Al Katz, K2UYH (SK)**, an EME station was assembled at a rural sheep barn in Revere, Pennsylvania. The station, **W3CCX/3**, began making EME contacts but the major obstacle to obtaining the WAC award was the lack of an EME station on 432 MHz on the South American continent.

Through a long series of coincidences, hard work by the Pack Rats to help assemble and transport to South America 20 boxes/crates, with the longest box being 6 feet or less, and a seaside cottage in Barranquilla, Colombia, six months of very intense effort ultimately paid off.

In early July 1976, six Pack Rats, **Elliott Weisman, W3JJZ**; **Walt Bohlman, K3BPP**; **Tony Souza, W3HMU**; **Bill Olson, W3HQT (now K1DY)**; **Dan Mitten, WA3NFV**, and **Bolmar Aguilar, WB3AOP / HK1AMW**, headed to Barranquilla with the callsign **HK1TL**. In one week of operating, the HK1TL expedition made 16 contacts, but since they were the only station in South America, it was one short of the six continents needed for the WAC award in Colombia.

Meanwhile, in Revere, Pennsylvania, the W3CCX/3 station manned by **Dave Mascaro, WA3JUF**, completed a contact with HK1TL on July 29, 1976, achieving the goal of contacting the final continent needed to give the Mt. Airy VHF Radio Club WAC on the 70-centmeter band.

But the story doesn't end there. The application for the WAC award was mailed and received. There was an issue with application, but no one remembered the details or recalled what actions were taken at that time. But the club never received a certificate.

With the help of retired **ARRL Chief Executive Officer Dave Sumner, K1ZZ**; **ARRL Radiosport and Field Services Manager Bart Janke, W9JJ**, and current **Chief Executive Officer David Minster, NA2AA**, "the ARRL went above and beyond to rectify the Mt. Airy VHF Radio Club lost EME WAC award application," said Miguelez. The award was dated June 6, 1977.

Thanks to **Phil Miguelez, WA3NUF**, and **Walt Bohlman, K3BPP**, for their contributions to this story. More information can be found at the Pack Rats website **https://packratvhf.com**. The HK1TL story is located on the History TAB or directly at : **https://packratvhf.com/index.php/history/30-pack-rat-1976-eme-expedition-hk1tl**

Article Credit : The ARRL Letter for August 22, 2024 - **www.arrl.org**

First Row : WA3NUF, K3RF. Middle Row : WA3QPX, KB5NJ, WA3GFZ, WA3DRC. Last Row : K1DS, K1JT, KC3BVL. [Photo courtesy of Phil Miguelez, WA3NUF]

Volunteer Monitor Program Report - June 2024

The Volunteer Monitor (VM) Program is a joint initiative between ARRL and the FCC to enhance compliance in the Amateur Radio Service. This is the June 2024 activity report of the VM Program.

- Two licensees in Florida received notices to stay off repeaters in Boca Raton, and the case was referred to the FCC for further enforcement action as appropriate.
- Uncoordinated repeater licensees in Virginia and New Jersey received advisory notices concerning interference to coordinated repeaters in their areas. The owners are taking steps toward resolution.
- A licensee in New York received an advisory notice about SSB operation below the permitted frequency of 14.150 MHz.
- A licensee in New Jersey received an advisory notice concerning interference to an HF net and his refusal to comply with the net control directive to cease using the net. He was also warned that his license renewal date was imminent and that administrative review of his license application, if filed, would be recommended to the FCC.

The totals for hours of monitoring by Volunteer Monitors during April and May 2024 will be reported in the July VM report upon full restoration of our website.

Thanks to Volunteer Monitor Program Administrator Riley Hollingsworth, K4ZDH

Gloucester County Amateur Radio Club
General Membership Meeting Minutes
Wednesday, August 7, 2024

Meeting opened @ 1900 Hours by President Jon Pearce, WB2MNF with the Pledge of Allegiance to the Flag

ATTENDANCE :
- In-person - 33
- Via Zoom - 20

VISITORS : Joe DiBartolo, KC2SFB (ZOOM)

NEW MEMBERS :
- **Christopher Angelastro, KE2DST, Cherry Hill, NJ**
- **Deirdre Hebert, AD2GQ, Blackwood, NJ**
- **John McGonigle, KC3ZJX, Drexel Hill, PA**
- **Robert Repetto, KE2DSX, Blackwood, NJ**
- **Gregg Rudinski, KE2DRM, North Cape May, NJ**
- **Paul Sandora, Bridgeton, NJ**

ANNOUNCEMENTS :
- Meteor Scatter Opportunity 8/12/24 @ 0600 EDT. Contact **Jon Pearce WB2MNF** if interested
- Whenever operating the Clubhouse station as W2MMD send ADIF logs to **Jim Wright N2GXJ**

UPCOMING EVENTS :
- EME Conference at The College of New Jersey 8/9-11/2024
- Meshtastic Licensed & Unlicensed Operation 8/31/24 @ 0900 EDT at the W2MMD Clubhouse

VOLUNTEER APPRECIATION AWARDS :
- **Greg Ciraula W5DO**
- **Steve Farney W2SEF**
- **Marc Federici WM2Y**
- **Gary Reed N2QEE**

MILT GOLDMAN AWARDS :
- **Jim Wright N2GXJ**
- **John Zaruba Jr. K2ZA**

GCARC MEMBER MINUTE :
- **Karl Frank W2KBF** added an Elecraft K3 to his shack.

BUSINESS MEETING :
- Minutes of July 2024 business meeting as published in CrossTalk were approved by voice vote of members present.

TREASURER'S REPORT :
- 2024 Operating Profit and Loss
  - Income : $14,109.30
  - Expense : $5,717.16
  - Net : $8,392.14
- Remarks : $4,000 expenditure upcoming for Clubhouse tower work.

Treasurer's report approved by voice vote of members present.

CLUBHOUSE REPORT : None

DX AND CONTESTS :
- **Tony Starr K3TS** reported on recent and upcoming contests

PUBLIC SERVICE :
- Bike MS coming up the end of September, details at : **https://n3mss.wordpress.com**
- **Bob Keogh KD2NEC** updated the status of the Red Cross EmComm trailer
- Annual Simulated Emergency Test coming up in October
- Discussion of Skywarn and Hurricane Watch Net

EDUCATION COMMITTEE :
- **Chris Prioli AD2CS** reported Technician Licensing Class starts 9/9/24, General 9/10/24, and Extra 9/13/24

TECHNICAL COMMITTEE :
- **Jon Pearce WB2MNF** gave a report on the status of the balloon launch project
- Two "Suborbital" test launches with party balloons were performed to validate mission parameters

HAMFEST :
- **Sheldon Parker K2MEN** reported on Hamfest preparations
- Volunteers needed for various roles

OLD BUSINESS : None

NEW BUSINESS : None

PRESENTATION :
- End-Fed Half-Wave Antenna (Build, Test, Deploy, & POTA Activation) by **Rob Zielfelder N1NUG**

Meeting adjourned @ 2008 Hours

Respectfully submitted,
John Zaruba Jr, K2ZA,
Recording Secretary

Milton L. Goldman Award

for outstanding service to

Gloucester County Amateur Radio Club

presented to

JAMES C. WRIGHT N2GXJ

on 7 August 2024
as selected by previous award recipients

Jonathan W. Pearce - WB2MNF
Club President

Milton L. Goldman Award

for outstanding service to

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presented to

JOHN A. ZARUBA JR. K2ZA

on 7 August 2024
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Jonathan W. Pearce - WB2MNF
Club President
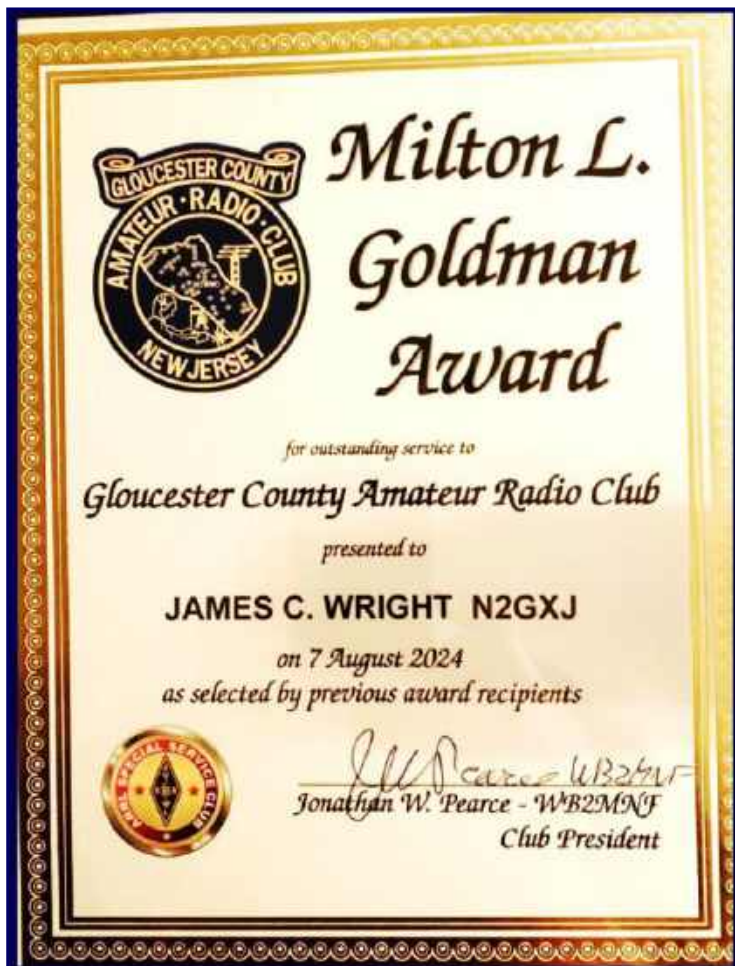
Gloucester County Amateur Radio Club
Board of Directors Meeting Minutes
Wednesday, August 21, 2024

Meeting opened @ 1900 Hours by President Jon Pearce, WB2MNF

Attendance :
- **President Jon Pearce, WB2MNF : Present**
- **Vice President Ron Block, NR2B : Present**
- **Treasurer John O'Connell, K2QA : Present**
- **Recording Secretary John Zaruba Jr, K2ZA : Present**
- **Corresponding Secretary Mike Resnick, N2WOQ : Present**
- **Director (2022-2024) Jeffrey Garth, WB2ZBN : Present**
- **Director (2022-2024) Frank Romeo, N3PUU : ZOOM**
- **Director (2023-2025) Chris Prioli, AD2CS : Present**
- **Director (2023-2025) James Wright, N2GXJ : ZOOM**
- **Director (2024-2026) Al Arrison, KB2AYU : Present**
- **Director (2024-2026) Bill Price, NJ2S : Present**
- Trustee (2021-2024) Carl Wittig, N2CRW
- Trustee (2022-2025) Charles Lanard, KD2EIB
- Trustee (2023-2026) Sheldon Parker, K2MEN
- Trustee (2024-2027) Len Rust, W2LJR
- **Member Bruce Canino, KD2LBU : Present**
- **Member Karl Frank, W2KBF : Present**

Previous Minutes : Approved by voice vote of Club Officers present.

New Member Applications :
- **Jack Berghof, Vineland, NJ**
- **Jonathan Davidson KE2DYD Gibbstown, NJ**

Approved by voice vote of Club Officers present.

Treasurer's Report :
- Income - $14,416.80
- Expense - $5,985.69
- Net - $8,431.11

Detailed financial statements are available for member review upon request. Treasurer's report approved by voice vote of Club Officers present.

Clubhouse Report :
- Negotiating with heavy equipment provider to schedule excavation for the new towers
- **Al Arrison KB2AYU** investigating 40m antenna SWR anomaly

Nets :
- **2 Meter Net : July 2024 - Tuesday Average : 8 Check-ins, Thursday Average : 10 Check-ins**
- **10 Meter Net : Tuesdays and Thursdays at 1930 Hours**
- **40 Meter Net : Mondays and Thursdays at 1930 Hours**

Programs and Activities Committee :
- Meshtastic intro program on 8/31/24 at the Clubhouse
- Prepper communications program on 9/14/24 at the Clubhouse
- **Jon Pearce WB2MNF** reported on Balloon Project curriculum

Education Committee :
- Tech and General License classes starting 9/9/24
- **Jon Pearce WB2MNF** discussed opportunity for GCARC licensing students participating in M.O.R.E. program (testing and licensing fee reimbursement along with other incentives)

Old Business :
- GCARC successfully provided internet access to the 4-H for the County Fair

New Business :
- Cooper University Healthcare approached the Club regarding a communications equipment donation. Motion made and approved by voice vote of Club Officers present to recommend to the GCARC Foundation that they accept the donation
- Discussion of **Ron Block NR2B**'s new book **"Lightning Protection for Amateur Radio"**
- Discussion of potential balloon launch at the Hamfest
- New Jersey QSO Party 9/21/24
- Board approved the membership discount when joining the Club at the Hamfest. Individuals who join the Club at the Hamfest, in October, November, or December, the Membership Fee will cover the balance of the current year PLUS the entire next year

Meeting adjourned @ 2011 Hours

Respectfully Submitted, John Zaruba Jr, K2ZA, Recording Secretary
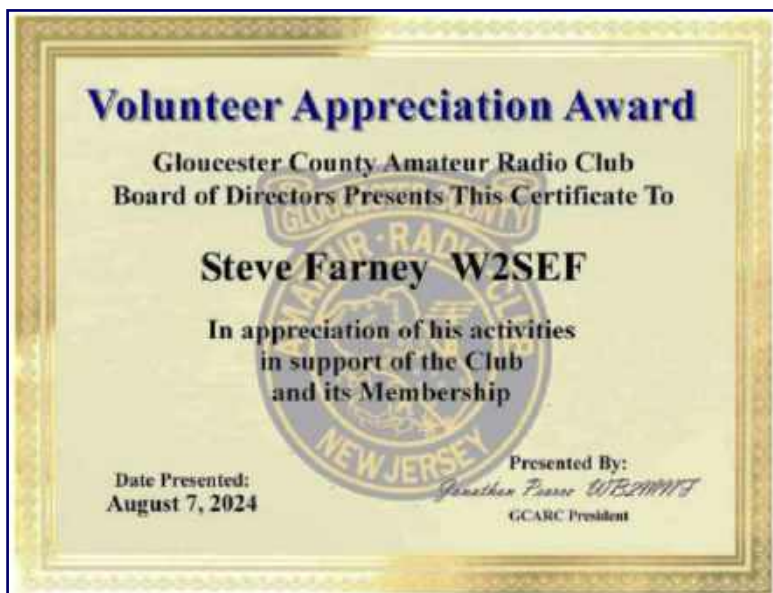
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Volunteer Appreciation Award

Gloucester County Amateur Radio Club
Board of Directors Presents This Certificate To

Steve Farney W2SEF

In appreciation of his activities
in support of the Club
and its Membership

Date Presented:
August 7, 2024

Presented By:
Jonathan Pearce WB2MNF
GCARC President

Volunteer Appreciation Award

Gloucester County Amateur Radio Club
Board of Directors Presents This Certificate To

Greg Ciraula W5DO

In appreciation of his activities
in support of the Club
and its Membership

Date Presented:
August 7, 2024

Presented By:
Jonathan Pearce WB2MNF
GCARC President
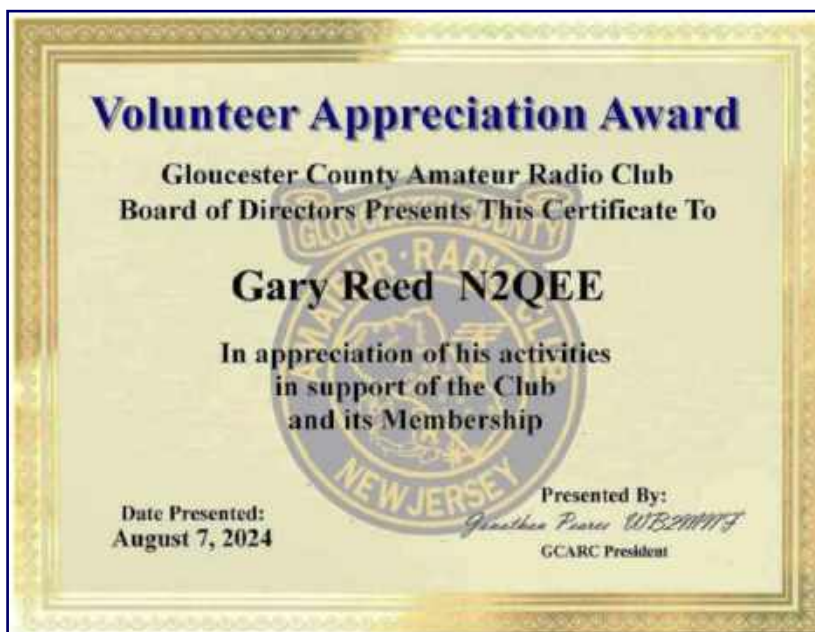
Name/Callsign	DXCC
Bill Grim, W0MHK	352
Dave Strout, W2YC	349
Edward De Fonzo, W2DE	339
Darrell Neron, AB2E	335
Bob Pantazes, W2ARP	290
John Hill, W2HUV	271
Gary Castellini, N2IEC	264
Vinnie Sallustio, N4NYY	262
Ken Denson, WB2P	248
Sheldon Parker, K2MEN	245
Jim Wright, N2GXJ	242
Tony Starr, K3TS	231
Dennis Sandole, K2SE	204
Howard Marder, WA2IBZ	154
Art Strong, KA0WS	147
Eric Morris, N2BRJ	144
Steve Farney, W2SEF	141
Phil Nunzio, WA3RGY	137
Rich Subers, W2RHS	124
Marc Federici, WM2Y	116
Bart Kleczynski, AC2PT	106
Ben Johnson, WB2GUK	104
Chuck Capasso, WB2PGE	103
Harry Strahlendorf Jr, W3DNQ	87
Jim Clark, KA2OSV	71
Lee Marino, N2LAM	62
Updated As Of 06/26/2024	

Volunteer Appreciation Award

Gloucester County Amateur Radio Club
Board of Directors Presents This Certificate To

Gary Reed N2QEE

In appreciation of his activities
in support of the Club
and its Membership

Date Presented:
August 7, 2024

Presented By:
Jonathan Pearce WB2MMF
GCARC President

September Birthdays

Congratulations To Our Members Who Are Celebrating A Birthday This Month

Jim Anderson, N2DQG
Jim Blose, KD2TAT
Ken Bozarth, KN2U
Marylu Ciraula, K3MLC
Harold Garron Jr, AC2BK
Mark Gottlieb, KK2L
Dale Guenther, KE2CYM
John Hill, W2HUV
Sergei Nenasheff, KE2BLO
Bill Price, NJ2S
Jim Ricketts, KC3TYH
Gene Schoeberlein, AA2YO
Jim Simeone, KC2AOF
Bill Wood, KD2OSJ
Todd Woodward, KD2ESH

In Memoriam : September Birthdays

Mark Anthony, WA2WFZ
Earl Bende, W2USG (Charter Member 1959)
Frederick Bergmann, WB2BPX
Harold Berry Sr, WA2QOY
William Blakeley, WA2ADB
William Burbage, N2QEB
Wallace Cantoni, W2HVW
Charles Coder, WA2UHQ
Robert Derderian Jr, N2IPH
Joseph Everhart, N2CX
Sidney Gantz, WB2JRU
Sonny Gutin, WB2DXB
William Hansche Jr, W2ILL
James Langworthy, KB2PAU

John Layton, W9UK
    (President 1965, Charter Member 1959)

Jose Lopez Jr, WB2OZE
Joseph Mitchell, KB2FRN
Henry Nierzwicki, N2OIP
Frank Ritter, K2UUY
Samuel Rosenberg, N2DWK
Jean Shisler, N2WRJ
Horace Simpson, W2JOZ (Charter Member 1959)
Harry Spiece, NJ2B
Russell Stafford, W3CH
Melvyn Sulzburgh, W2NM
Edward Wargo, WA2ED

Friday, September 27, 2024

Bike MS : City To Shore Ride 2024
September 28 - 29, 2024

Bike MS : Bike To The Bay (Delaware) 2024
October 5, 2024

N3MSS Amateur Radio Communications
Bike MS Volunteers
www.n3mss.org

Club Merchandise from the K2ZA Workshop
Contact John Zaruba Jr, K2ZA at k2za@icloud.com
Go To : https://gloucestercountyarc.weebly.com/club-merchandise.html

So you find our website confusing, can't find anything, Well So Do I!!

I have created a page *(What, Not Another Page!!)* **called "Quick Links"**

**On this page you will find "Buttons" to some the most popular pages
I will add more as time goes on, but I hope this helps your journey navigating through your Club Website!**
https://gloucestercountyarc.weebly.com/quick-links.html

Volunteer Appreciation Award

Gloucester County Amateur Radio Club
Board of Directors Presents This Certificate To

Marc Federici WM2Y

In appreciation of his activities
in support of the Club
and its Membership

Date Presented:
August 7, 2024

Presented By:
Jonathan Pearce WB2MNF
GCARC President

CQ WPX RTTY Contest 2024
February 10, 2024

Call : WB2PJH
Operator (s) : WB2PJH
Station : WB2PJH

Class : SOAB LP
QTH :
Operating Time (hrs) : 22
Location : USA

Summary :

Band	QSOs
40 :	184
20 :	113
15 :	196
10 :	168

Total : 661   **Prefixes :** 405
Total Score : 681,210

Club : Frankford Radio Club   24

Comments :
My best score to date! Band conditions were amazing!

ARRL DX Contest, CW 2024
February 17, 2024

Call : WB2PJH
Operator (s) : WB2PJH
Station : WB2PJH

Class : SOUAB HP
QTH :
Operating Time (hrs) : 30
Location : USA

Summary :

Band	QSOs	Mults
160 :	2	2
80 :	27	20
40 :	217	68
20 :	287	78
15 :	280	84
10 :	182	63

Total : 995   315
Total Score : 940,275

Club : Frankford Radio Club   28

Comments :
My 80 and 40 meter dipoles were at 15 ft- rope broke during snowstorm and no way to get it back up in the tree. This was my best score by 4X in this contest. Great EU and JA ops, good condi-

Weekly RTTY Test 2024
February 16, 2024

Call : AB2E/VP9
Operator (s) : AB2E
Station : AB2E/VP9

Class : Single Op LP
QTH : VP9
Operating Time (hrs) : 05
Location : Other North America

Summary :

Band	QSOs
80 :	1
40 :	7
20 :	1

Total : 9   **Unique Calls :** 8
Total Score : 72

                                                      25

Club : Frankford Radio Club

Comments :
Rig : K3
A3S & Dipoles at VP9GE QTH

Thought I would give this a try. Great to have some ongoing RTTY practice. This will help things run smoothly for the big RTTY contests.

CU Next week from home QTH.
73
Darrell AB2E/VP9

Contest : WRT

Band	QSOs	Pts	Cll	Pt/Q
3.5	1	1	1	1.0
7	7	7	6	1.0
14	1	1	1	1.0
Total	9	9	8	1.0

Score : 72
1 Mult = 1.1 Q's

September 18, 1947

U.S. AIR FORCE BIRTHDAY
Est. 1947

ARRL DX Contest, CW 2024
February 17, 2024

Call : VP9I
Operator (s) : AB2E
Station : VP9GE

Class : SOUAB LP
Class Overlay : Limited-Ant
QTH : VP9
Operating Time (hrs) : 38
Location : Other North America

Summary :

Band	QSOs	Mults
160 :	235	44
80 :	548	58
40 :	788	59
20 :	873	60
15 :	731	59
10 :	428	53

Total : 3,603   333
Total Score : 3,599,397

Club : Frankford Radio Club   **26**

Comments :
Rig : Elecraft K3
Antennas :
QTH Antennas of VP9GE (A4S tribander 10-15-20m)
Dipoles 40/80/160

First time to operate single op from the DX side for this contest. Note that DX scoring is separate from USA/VE stations in ARRL DX Contests.

Phenomenal runs on all bands were had, very few slow times, and no station problems. LP was tough for s&p so I only went after a few of the rarer mults. Running is the best strategy here, and most of the US/VE mults eventually come to find you.

160m was extremely very low noise both nights, and very weak stations were easily copied on the xmit antenna. 40/80/160 were the place to be after dark until sunrise, and did not slow down until around until around 1000UTC. All band condx were fabulous.

Most of the available mults were worked, and I was pleased with both the QSO & mult outcome.

Special thanks to my host Ed VP9GE, who makes each of these trips a memorable radio experience (this was my third major contest here & I'm booked for more).

Thanks to the many FRC'ers who worked me on 5 or 6 bands in the contest! Time to pack, and catch the flight back home Monday.

73 & CU in CQ160SSB test next weekend Darrell AB2E/VP9 (VP9I for the contest)

ARRL DX Contest, CW 2024
February 17, 2024

Call : K3TS
Operator (s) : K3TS
Station : K3TS

Class : SOUAB HP
QTH : SNJ
Operating Time (hrs) : 19.5
Location : USA

Summary :

Band	QSOs	Mults
160 :	20	19
80 :	50	47
40 :	90	73
20 :	314	92
15 :	281	89
10 :	250	95

Total : 1,005   415
Total Score : 1,251,225

Club : Frankford Radio Club   **27**

Comments :
Excellent conditions across all bands, but I knew going in that I would not be able to do my usual 34 hours or so, due the fact that we are moving in a few weeks, and everything now revolves around packing up the house.

Instead, I budgeted 18 to 20 hours for the contest, and set a goal of 1000 Q's and/or 1 million points, and it all worked out, but it is just not the same as an all-out effort. Hopefully next year I will be in a new QTH, with my station back in good shape, and the great conditions will return.

If not, we will find a way to adapt to it all.

Thanks to all the DX for answering and making this one great. We couldn't have done it without you!

73 for now, de K3TS.

Go FRC!

Contest : ARRLDXCW

Band	QSOs	Pts	Sec	Pt/Q
1.8	235	705	44	3.0
3.5	548	1,644	58	3.0
7	788	2,364	59	3.0
14	873	2,619	60	3.0
21	731	2,193	59	3.0
28	428	1,284	53	3.0
Total	3,603	10,809	333	3.0

Score : 3,599,397
1 Mult = 10.8 Q's

CQ 160 Meter Contest, SSB 2024
February 23, 2024

Call : AB2E
Operator (s) : AB2E
Station : AB2E

Class : Single Op Assisted HP
QTH : NJ
Operating Time (hrs) : 4
Location : USA

Summary :
Total : QSOs : 131   State/Prov : 37   Countries : 16
Total Score : 23,797

Club : Frankford Radio Club   **30**

Comments :
Rig : FTDX-9000D/OM Power 2000A+
Antenna : Inverted L over 100ft tree, RX: HiZ4 4-square

I didn't have a lot of time for this one. Fri night condx seemed poor, did not work very many states, no EU heard. All s&p, although I tried a few CQs with only 1 or 2 takers. Sat night at first looked like a repeat. Got on for an hour or so about 0100UTC and worked a few new states, still no EU. Took a break to watch TV with the family. Got back on around 0500UTC to find many EU spots that were readable and strong enough to work & were typically coming back to me on the first call. 3/4 of my score came from those mults & 10 point EU stations that lasted about 90 minutes or so til after EU sunrise.

Gearing up for ARRL DX SSB next weekend, cu then!
73
Darrell AB2E

Contest : CQ160SSB

Band	QSOs	Pts	StP	DXC	Pt/Q
1.8	131	449	37	16	3.4
Total	131	449	37	16	3.4

Score : 23,797
1 Mult = 2.5 Q's

South Carolina QSO Party 2024
February 24, 2024

Call : WB2PJH
Operator (s) : WB2PJH
Station : WB2PJH

Class : Single Op Fixed Mixed LP
QTH :
Operating Time (hrs) : 3
Location : Out of State/Province

Summary :

Band	CW Qs	Ph Qs	CW Mults	Ph Mults
40 :	15	7	13	6
20 :	13	2	9	2
Total :	28	9	22	8

Total Score : 3,576

Club : Frankford Radio Club   **31**

North American QSO Party, RTTY 2024
February 25, 2024

Call : WB2PJH
Operator (s) : WB2PJH
Station : WB2PJH

Class : Single Op Assisted LP
QTH :
Operating Time (hrs) : 5.5
Location : USA

Summary :

Band	QSOs	Mults
80 :	23	13
40 :	44	25
20 :	52	28
15 :	45	21
10 :	11	7
Total :	175	99

Total Score : 17,325

Club : Frankford Radio Club   **32**

Summary :

Band	QSOs	Mults
40 :	3	3
20 :	1	1
Total :	4	4

Total Score : 16

Club : Frankford Radio Club   **34**

K1USN Slow Speed Test 2024
February 26, 2024

Call : W2TEF
Operator (s) : W2TEF
Station : W2TEF

Class : Academy Single Op QRP
QTH : Glassboro NJ
Operating Time (hrs) : .75
Location : USA

Announced DX Operations
www.ng3k.com/Misc/adxo.html
From The Shack of Bill Feidt, NG3K : www.ng3k.com

September						
2024 Sep01	2024 Sep08	South Cook Is	E51WLG	LoTW	DXW.Net 20240720	By N2WLG fm Rarotonga I (IOTA OC-013); 40-10m; CW + digital; QSL via N2WLG (B/d)
2024 Sep02	2024 Sep10	Grenada	J3	LoTW	TDDX 20240820	By N9GB as J3/N9GB; 40-10m, perhaps 6m; CW SSB; QSL via EB7DX; holiday style operation
2024 Sep02	2024 Sep16	American Samoa	KH8T	M0URX	TDDX 20240530	By N5DD W5MJ K5PI VE7KW; 80-10m, perhaps 160 and 6m; CW SSB FT8; 2 stations
2024 Sep03	2024 Sep13	Zimbabwe	Z22AO	HA5AO OQRS	DXW.Net 20240304	By HA5AO fm Zambezi National Park (KH21ww); 80-6m; CW SSB FT8
2024 Sep05	2024 Sep09	Monaco	3A	EB7DX	DXW.Net 20240418	By MM0NDX as 3A/MM0NDX and MM0SAJ as 3A/MM0SAJ; focus on low bands + 6m; SSB RTTY FT8
2024 Sep05	2024 Sep15	Pitcairn	VP6WR	LoTW	DXW.Net 20240123	By G0VDE; 80-10m; SSB FT8, perhaps CW; QSL via M0URX OQRS
2024 Sep08	2024 Sep22	Burkina Faso	XT2AW	LoTW	DXW.Net 20240818	By DF2WO fm Ouagadougou; 80-10m; SSB FT4 QO-100; QSL via M0OXO OQRS
2024 Sep09	2024 Sep30	Somalia	6O0T	LoTW	DXW.Net 20230910	By team; focus on low bands + 6m; SSB CW + digital
2024 Sep10	2024 Sep17	St Kitts & Nevis	V4	LoTW	DXW.Net 20240803	By WE9G as V4/WE9G fm Frigate Bay (FK87pg); HF; mainly digtal; QSL via Club Log OQRS
2024 Sep10	2024 Sep20	Madagascar	5R8SR	Club Log OQRS	TDDX 20240711	By M0KRI fm Nosy Faly (IOTA AF-057); 80-10m; CW FT8 SSB; 100w; vertical; dates tentative
2024 Sep11	2024 Sep16	Jersey	MJ NEW	LoTW	DXW.Net 20240822	By TA1HZ as MJ/TA1HZ; HF; QRV for WAE SSB Contest; QSL via Club Log OQRS or TA1HZ direct w/ 5USD + SAE
2024 Sep14	2024 Sep23	Zambia	9J2AO	HA5AO OQRS	DXW.Net 20240304	By HA5AO fm nr Victoria Falls (KH22wc); 80-6m; CW SSB FT8
2024 Sep17	2024 Sep21	French Polynesia	FO	TBA	DXW.Net 20240123	By G0VDE as FO/G0VDE; 80-10m; SSB FT8, perhaps CW
2024 Sep18	2024 Oct01	St Kitts & Nevis	V47JA	LoTW	W5JON 20240626	By W5JON fm Calypso Bay; 160-6m; SSB FT8; yagi, verticals; QSL also OK via W5JON direct
2024 Sep18	2024 Oct06	Tanzania	5H1WX	I8KHC	DXW.Net 20240621	By OK2WX fm Mafia I (IOTA AF-054); 80-10m; CW SSB + digital
2024 Sep19	2024 Nov12	Namibia	V51WH	DK2WH (B/d)	TDDX 20240819	By DK2WH; 160-10m, including 60m; SSB FT8, some CW
2024 Sep20	2024 Sep22	Greenland	XP2I NEW	LoTW	DXW.Net 20240821	By OZ2I fm Black Ridge (GP47pa, 200m ASL); 80-10m, perhaps 160m; CW; QSL via Club Log OQRS
2024 Sep24	2024 Oct04	Botswana	A25AO	HA5AO OQRS	DXW.Net 20240304	By HA5AO fm Chobe National Park (KH22ox); 80-6m; CW SSB FT8
2024 Sep28	2024 Oct07	Reunion	TO2DX	OM2DX	DXW.Net 20240813	By OM2DX; HF; CW + digital; EFHWs; QRV for CQWW DX RTTY Contest
2024 Sep30	2024 Oct11	Namibia	V55LA NEW	M0OXO	OPDX 20240823	By LA7THA + team; HF; CW SSB

Also for your convenience, there is a direct link to NG3K on our website. Click on the NG3K DX Page.

September 2024

Contest	Time
Tennessee QSO Party	1700Z, Sep 1 to 0300Z, Sep 2
K1USN Slow Speed Test	0000Z-0100Z, Sep 2
ICWC Medium Speed Test	1300Z-1400Z, Sep 2
OK1WC Memorial	1630Z-1729Z, Sep 2
RSGB 80m Autumn Series, SSB	1900Z-2030Z, Sep 2
ICWC Medium Speed Test	1900Z-2000Z, Sep 2
MI QRP Labor Day CW Sprint	2300Z, Sep 2 to 0300Z, Sep 3
ARS Spartan Sprint	0000Z-0200Z, Sep 3
Worldwide Sideband Activity Contest	0100Z-0159Z, Sep 3
ICWC Medium Speed Test	0300Z-0400Z, Sep 3
Phone Weekly Test	0230Z-0300Z, Sep 4
A1Club AWT	1200Z-1300Z, Sep 4
CWops Test	1300Z-1400Z, Sep 4
Mini-Test 40	1700Z-1759Z, Sep 4
VHF-UHF FT8 Activity Contest	1700Z-2100Z, Sep 4
Mini-Test 80	1800Z-1859Z, Sep 4
CWops Test	1900Z-2000Z, Sep 4
UKEICC 80m Contest	2000Z-2100Z, Sep 4
Walk for the Bacon QRP Contest	0000Z-0100Z, Sep 5 and 0200Z-0300Z, Sep 6
CWops Test	0300Z-0400Z, Sep 5
CWops Test	0700Z-0800Z, Sep 5
NRAU 10m Activity Contest	1700Z-1800Z, Sep 5 (CW) and 1800Z-1900Z, Sep 5 (SSB) and 1900Z-2000Z, Sep 5 (FM) and 2000Z-2100Z, Sep 5 (Dig)
SKCC Sprint Europe	2000Z-2200Z, Sep 5
NCCC FT4 Sprint	0100Z-0130Z, Sep 6
Weekly RTTY Test	0145Z-0215Z, Sep 6
NCCC Sprint Ladder	0230Z-0300Z, Sep 6
K1USN Slow Speed Test	2000Z-2100Z, Sep 6
All Asian DX Contest, Phone	0000Z, Sep 7 to 2400Z, Sep 8
Wake-Up! QRP Sprint	0600Z-0629Z, Sep 7 and 0630Z-0659Z, Sep 7 and 0700Z-0729Z, Sep 7 and 0730Z-0800Z, Sep 7
SARL Field Day Contest	0800Z, Sep 7 to 1000Z, Sep 8
SARL VHF/UHF FM Contest	0800Z, Sep 7 to 1000Z, Sep 8
Russian RTTY WW Contest	1200Z, Sep 7 to 1159Z, Sep 8
RSGB SSB Field Day	1300Z, Sep 7 to 1300Z, Sep 8
IARU Region 1 Field Day, SSB	1300Z, Sep 7 to 1259Z, Sep 8
IARU Region 1 145 MHz Contest	1400Z, Sep 7 to 1400Z, Sep 8
Ohio State Parks on the Air	1400Z-2200Z, Sep 7
AGCW Straight Key Party	1600Z-1900Z, Sep 7
CWOps CW Open	2000Z-2359Z, Sep 7
PODXS 070 Club Jay Hudak Memorial 80m Sprint	2000Z, Sep 7 to 2000Z, Sep 8
North American Sprint, CW	0000Z-0400Z, Sep 8
WAB 144 MHz QRO Phone	1000Z-1400Z, Sep 8
K1USN Slow Speed Test	0000Z-0100Z, Sep 9
4 States QRP Group Second Sunday Sprint	0000Z-0200Z, Sep 9
ICWC Medium Speed Test	1300Z-1400Z, Sep 9
OK1WC Memorial	1630Z-1729Z, Sep 9
ICWC Medium Speed Test	1900Z-2000Z, Sep 9
144 MHz Fall Sprint	1900 local - 2300 local, Sep 9
Worldwide Sideband Activity Contest	0100Z-0159Z, Sep 10
ICWC Medium Speed Test	0300Z-0400Z, Sep 10
Phone Weekly Test	0230Z-0300Z, Sep 11
A1Club AWT	1200Z-1300Z, Sep 11
CWops Test	1300Z-1400Z, Sep 11
Mini-Test 40	1700Z-1759Z, Sep 11
VHF-UHF FT8 Activity Contest	1700Z-2100Z, Sep 11
Mini-Test 80	1800Z-1859Z, Sep 11
CWops Test	1900Z-2000Z, Sep 11
RSGB 80m Autumn Series, CW	1900Z-2030Z, Sep 11
CWops Test	0300Z-0400Z, Sep 12
CWops Test	0700Z-0800Z, Sep 12
BCC QSO Party	1800Z-1959Z, Sep 12
NCCC FT4 Sprint	0100Z-0130Z, Sep 13
Weekly RTTY Test	0145Z-0215Z, Sep 13
NCCC Sprint Ladder	0230Z-0300Z, Sep 13
K1USN SST Open	2000Z-2359Z, Sep 13
FOC QSO Party	0000Z-2359Z, Sep 14
WAE DX Contest, SSB	0000Z, Sep 14 to 2359Z, Sep 15
SKCC Weekend Sprintathon	1200Z, Sep 14 to 2400Z, Sep 15
Africa FT4 DX Contest	1500Z-1800Z, Sep 14
Russian Cup Digital Contest	1500Z-1859Z, Sep 14 and 0600Z-0959Z, Sep 15
ARRL September VHF Contest	1800Z, Sep 14 to 0300Z, Sep 16
North American Sprint, RTTY	0000Z-0400Z, Sep 15

September 2024 Contest Calendar - Continued from page 57

Contest	Time
IRTS 70cm Counties Contest	1300Z-1330Z, Sep 15
IRTS 2m Counties Contest	1330Z-1500Z, Sep 15
BARTG Sprint PSK63 Contest	1700Z-2059Z, Sep 15
Run for the Bacon QRP Contest	2300Z, Sep 15 to 0100Z, Sep 16
K1USN Slow Speed Test	0000Z-0100Z, Sep 16
ICWC Medium Speed Test	1300Z-1400Z, Sep 16
OK1WC Memorial	1630Z-1729Z, Sep 16
ICWC Medium Speed Test	1900Z-2000Z, Sep 16
RSGB FT4 Contest	1900Z-2030Z, Sep 16
Worldwide Sideband Activity Contest	0100Z-0159Z, Sep 17
ICWC Medium Speed Test	0300Z-0400Z, Sep 17
222 MHz Fall Sprint	1900 local - 2300 local, Sep 17
Phone Weekly Test	0230Z-0300Z, Sep 18
A1Club AWT	1200Z-1300Z, Sep 18
CWops Test	1300Z-1400Z, Sep 18
VHF-UHF FT8 Activity Contest	1700Z-2100Z, Sep 18
Mini-Test 40	1700Z-1759Z, Sep 18
Mini-Test 80	1800Z-1859Z, Sep 18
CWops Test	1900Z-2000Z, Sep 18
Walk for the Bacon QRP Contest	0000Z-0100Z, Sep 19 and 0200Z-0300Z, Sep 20
NAQCC CW Sprint	0030Z-0230Z, Sep 19
CWops Test	0300Z-0400Z, Sep 19
CWops Test	0700Z-0800Z, Sep 19
NTC QSO Party	1900Z-2000Z, Sep 19
NCCC FT4 Sprint	0100Z-0130Z, Sep 20
Weekly RTTY Test	0145Z-0215Z, Sep 20
NCCC Sprint Ladder	0230Z-0300Z, Sep 20
AGB NEMIGA Contest	1600Z-1700Z, Sep 20
K1USN Slow Speed Test	2000Z-2100Z, Sep 20
ARRL EME Contest	0000Z, Sep 21 to 2359Z, Sep 22
ARRL 10 GHz and Up Contest	0900Z, Sep 21 to 0759Z, Sep 23
Scandinavian Activity Contest, CW	1200Z, Sep 21 to 1200Z, Sep 22
Iowa QSO Party	1400Z, Sep 21 to 0200Z, Sep 22
New Jersey QSO Party	1400Z, Sep 21 to 0159Z, Sep 22
Texas QSO Party	1400Z, Sep 21 to 0200Z, Sep 22 and 1400Z-2000Z, Sep 22
QRP Afield	1500Z-2100Z, Sep 21
Washington State Salmon Run	1600Z, Sep 21 to 0700Z, Sep 22 and 1600Z-2400Z, Sep 22
Wisconsin Parks on the Air	1600Z-2300Z, Sep 21
New Hampshire QSO Party	1600Z, Sep 21 to 0400Z, Sep 22 and 1200Z-2200Z, Sep 22
Feld Hell Sprint	1800Z-1959Z, Sep 21
K1USN Slow Speed Test	0000Z-0100Z, Sep 23
ICWC Medium Speed Test	1300Z-1400Z, Sep 23
OK1WC Memorial	1630Z-1729Z, Sep 23
ICWC Medium Speed Test	1900Z-2000Z, Sep 23
Worldwide Sideband Activity Contest	0100Z-0159Z, Sep 24
ICWC Medium Speed Test	0300Z-0400Z, Sep 24
SKCC Sprint	0000Z-0200Z, Sep 25
Phone Weekly Test	0230Z-0300Z, Sep 25
A1Club AWT	1200Z-1300Z, Sep 25
CWops Test	1300Z-1400Z, Sep 25
Mini-Test 40	1700Z-1759Z, Sep 25
Mini-Test 80	1800Z-1859Z, Sep 25
432 MHz Fall Sprint	1900 local - 2300 local, Sep 25
CWops Test	1900Z-2000Z, Sep 25
UKEICC 80m Contest	2000Z-2100Z, Sep 25
CWops Test	0300Z-0400Z, Sep 26
CWops Test	0700Z-0800Z, Sep 26
RSGB 80m Autumn Series, Data	1900Z-2030Z, Sep 26
NCCC FT4 Sprint	0100Z-0130Z, Sep 27
Weekly RTTY Test	0145Z-0215Z, Sep 27
NCCC Sprint Ladder	0230Z-0300Z, Sep 27
K1USN Slow Speed Test	2000Z-2100Z, Sep 27
CQ Worldwide DX Contest, RTTY	0000Z, Sep 28 to 2400Z, Sep 29
ARSI VU DX Contest	1200Z, Sep 28 to 1200Z, Sep 29
Maine QSO Party	1200Z, Sep 28 to 1200Z, Sep 29
Masonic Lodges on the Air	1400Z-2200Z, Sep 28
AGCW VHF/UHF Contest	1400Z-1700Z, Sep 28 (144) and 1700Z-1800Z, Sep 28 (432)
AWA Amplitude Modulation QSO Party	2000Z, Sep 28 to 2400Z, Sep 29
UBA ON Contest, 6m	0700Z-1000Z, Sep 29
K1USN Slow Speed Test	0000Z-0100Z, Sep 30
ICWC Medium Speed Test	1300Z-1400Z, Sep 30
QCX Challenge	1300Z-1400Z, Sep 30
OK1WC Memorial	1630Z-1729Z, Sep 30
ICWC Medium Speed Test	1900Z-2000Z, Sep 30
QCX Challenge	1900Z-2000Z, Sep 30

2024 Club Committees

Standing Committees	Committee Chairs
Budget	John O'Connell, K2QA
Constitution & By-Laws	Ron Block, NR2B
Education	Chris Prioli, AD2CS
Field Day	Tony Starr, K3TS
Hamfest	Sheldon Parker, K2MEN and Bill Price, NJ2S
Health, Welfare, & Silent Keys	Bill Price, NJ2S
Hospitality	Jeff Garth, WB2ZBN
Membership	Chris Prioli, AD2CS
Membership Badges	Chris Prioli, AD2CS
Nominations	Jon Pearce, WB2MNF
Publicity	Mike Resnick, N2WOQ
Repeaters	*Open Chair*
W2MMD Clubhouse Site	Al Arrison, KB2AYU

Activity Committees	Committee Chairs
Awards & Certificates	GCARC Board of Directors
Club Photographer	Phil Nunzio, WA3RGY
Club Publications & Historian	Jeff Garth, WB2ZBN
Contests	Tony Starr, K3TS
GCARC Foxhunts	Jim Wright, N2GXJ
GC-ARES Emergency Coordinator	Bob Keogh, KD2NEC
Holiday Dinner Party	Frank Romeo, N3PUU & Kathy Romeo
License Testing/VEC Liaison	Gary Reed, N2QEE
Membership Roster Database	Jeff Garth, WB2ZBN
Programs : General Membership Meetings	Ron Block, NR2B
Radio Nets	*Open Chair*
Technical (Tech Saturday, TechNets)	Jon Pearce, WB2MNF
W2MMD License Trustee	Darrell Neron, AB2E
W2MMD Special Event Station	Mark Gottlieb, KK2L

GCARC *<at>* Mailman *<dot>* QTH *<dot>* Net e-mail reflector guidelines

1. **No attachments** (e.g. pictures, files) are allowed on the reflector.
2. If you have Club-related pictures that you would like to share, you can send them to the webmaster, he will put them on the website and will send out a general e-mail to all the members.
3. Otherwise, the pictures will have to be sent to the members' addresses.
4. URLs/Hyperlinks are acceptable on the reflector.
5. Do not send any messages with e-mail addresses in the **BCC** (**Blind Carbon Copy**) field. The message will be rejected. Use only the **To:** or **CC:** fields.
6. Members are subscribed to the reflector using the member's e-mail address from the roster database. You must use that address when sending an e-mail via the reflector.
7. If you use another address on the reflector, the message will get rejected or "*bounced*", because the reflector does not recognize that address. Whenever a message sent to reflector is rejected or *"bounced"* for various reasons, the administrator has to log-in to the Mailman.QTH website and approve the message.

The W2MMD Repeaters

2 Meter Repeater
Output : 147.180 MHz
Input : 147.780 MHz
Offset : +600 kHz - PL : 131.8 Hz
(Conventional FM plus C4FM Capability)
EchoLink : W2MMD-R

70 cm Repeater
Output : 442.100 MHz
Input : 447.100 MHz
Offset : +5 MHz - PL : 131.8 Hz
(Conventional FM plus C4FM Capability)

The above repeaters are both
located in Pitman, NJ
GPS : 39.728481°, -75.131088°

1.25 Meter Repeater
Output : 224.660 MHz
Input : 223.060 MHz
Offset : -1.6 MHz - PL : 131.8 Hz
Location : Sewell, NJ
GPS : 39.746738°, -75.077094°

SKYWARN™ Net
Sunday @ 1930 : 147.180 MHz Repeater

Gloucester County ARES Net
Sunday @ 2000 : 147.180 MHz Repeater

GCARC TechNet ZOOM Forum
Available Every Monday @ 1930 Hours
Join ZOOM Meeting Link :
https://bit.ly/3K8bWwj

Tuesday AfterNoon 2M Net @ 1200 Hours

Tuesday & Thursday 10 Meter Net @ 1930 Hours
28.465 MHz or 28.475 MHz

Monday & Thursday Night 40M Net
1930 Hours
7.225 MHz (+/- 5 or 10 kHz)

Thursday 2M Net @ 2000 Hours

Meeting Calendar

General Membership Meeting
Wednesday, September 4, 2024
1900 Hours
Pfeiffer Community Center
Simulcast Live on ZOOM
Meeting ID : 943 0211 9674
Passcode : 843147
Join ZOOM Meeting Link :
https://bit.ly/44P4HCU

Board of Directors Meeting
Wednesday, September 18, 2024
1900 Hours
W2MMD Clubhouse

"There's More To Ham Radio Than
You Can Possibly Do!"
- K3TS

"The big thing about being in a club and
being a "Ham" is to help each other
when there is a need "
- W2SEF

*** Badges ***

Need a new or replacement badge
Contact "*The Badge Man*"

Chris Prioli, AD2CS
chris@ad2cs.com

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73   Gloucester County Amateur Radio Club - P. O. Box 370 - Pitman, NJ 08071   Ω

September 2024 CrossTalk : Learning Stuff! Building Stuff! Doing Stuff! TOGETHER! 60